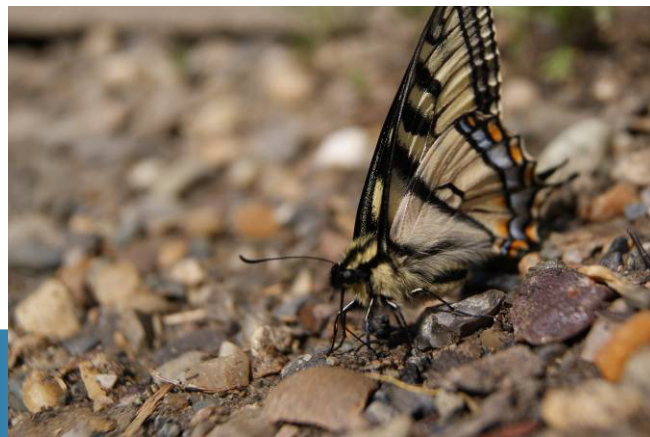
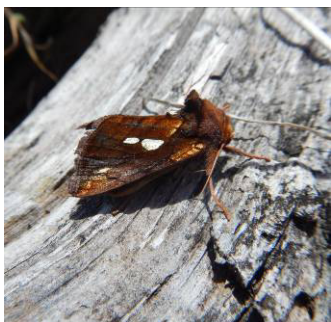


# Boreus



**Newsletter of the Entomological Society of British Columbia**



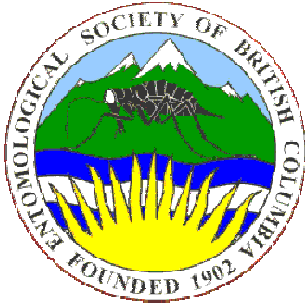


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## The Executive



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

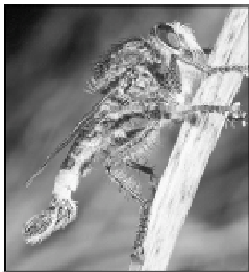
<b>President</b>	Mike Smirle Agriculture and Agri-Food Canada, Summerland
<b>President-Elect</b>	Steve Perlman University of Victoria, Victoria
<b>Past-President</b>	Ward Strong BC Ministry of Forests, Vernon
<b>Secretary</b>	Tracy Hueppelsheuser BCMAL, Abbotsford, BC
<b>Treasurer</b>	Maxence Salomon Douglas College, New Westminster
<b>Editorial Committee (Journal)</b>	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
<b>Editor (Boreus)</b>	Gabriella Zilahi-Balogh Canadian Food Inspection Agency, Kelowna
<b>Directors</b>	Renee Prasad (1 <sup>st</sup> ) E.S. Crop Consult Jenny Cory (2nd) Simon Fraser University, Burnaby Marla Scharzfled (1 <sup>st</sup> ) University of Northern BC Bob Lalonde (2nd) University of British Columbia, Okanagan Campus, Kelowna Karen Needham (2nd) University of British Columbia, Vancouver Campus, Vancouver
<b>Graduate Student Representative</b>	Ikkei Shikano Simon Fraser University, Burnaby
<b>Honorary Auditor</b>	Rob McGregor Douglas College, New Westminster
<b>Regional Director of National Society</b>	Bill Riel Canadian Forest Service, Victoria
<b>Web Page Editor</b>	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](mailto:journal@entsocbc.ca).

The deadline for submissions to be included in the 2013 issue is 1 September, 2013. 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.

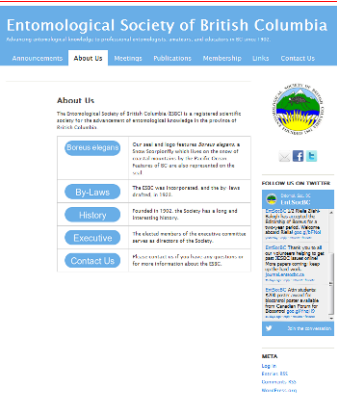
Please submit any entomological photograph, article, event or informational tidbit to the Editor!

*Boreus* has a new editor starting January 2013, please send correspondence concerning *Boreus* to Gabriella (Riella) Zilahi-Balogh at [boreus@entsocbc.ca](mailto:boreus@entsocbc.ca).

The deadline for submissions to be included in the June issue is May 15, 2013 and the December issue is November 15.



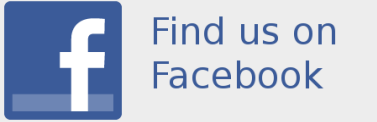
## ESBC Website



**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. There is an additional \$10.00 (Domestic) or \$15.00 (International) charge to receive hardcopies of the Journal. 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, Maxence Solomon, E-mail: [membership@entsocbc.ca](mailto:membership@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:

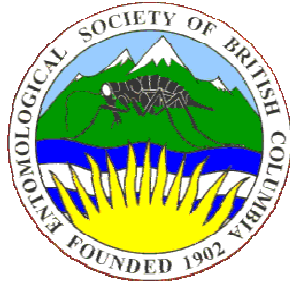
Greater Night-stalking Tiger Beetle ( <i>Omus dejeani</i> ), taken on Denman Island, B.C. Photograph by Jennifer Heron.	Helliwell Provincial Park, May 2012. Photograph by Jennifer
Photographs taken in the Peace Region, BC. Photographs by Jennifer Heron	



Art Stock sampling Balsam Woolly Adelgid in Rossland. Photo Credits: G. Zilahi-Balogh



## ESBC Annual General Meeting 2013



**Entomological Society of British Columbia  
Annual General Meeting  
November 1, 2013**

**Pacific Forestry Centre  
506 West Burnside Road  
Victoria, BC, V8Z 1M5**

830-900 Registration

900-915 Welcome – Ward Strong (President, ESBC)

### **First Session (Moderator: Gabriella Zilahi-Balogh)**

915-930 **Andrew Bennett** - Phylogenetics and Natural History of the subfamily Tryphoninae (Hymenoptera: Ichneumonidae).

930-945 **Veronika Lambinet**, Mike E. Hayden, Marco Bieri & Gerhard Gries - Bee talk - Do honeybees use the earth magnetic field as a reference to align their waggle dance?

945-1000 **Amber Paulson**, Steve Perlman, Patrick von Aderkas - *De novo* transcriptome of *Megastigmus spermotrophus*: hunting for mechanisms of host manipulation.

1000-1015 **Adrian Behennah** - Cyborg insects: military and non-military research and applications.

1015-1030 Christina Hodson, **Selina Dhanani**, A. Hoi, Alex Chubaty & Franz Simon - *Drosophila suzukii* in *D. suzukii* world: Humidity decreases density dependent competition.

1030-1100 COFFEE BREAK (Coffee and refreshments provided)

### **Second session (Moderator: Rob McGregor)**

1100-1115 **Grant Olson** & Jenny Cory - Transgenerational Effects on Disease Resistance in an Insect Herbivore.

1115-1130 **Catherine Scott**, Devin Kirk, Sean McCann & Gerhard Gries - Web reduction behaviour in black widows: a story of attraction, courtship, manipulation, and rivalry.



1130-1145 **Phineas Hamilton**, Jong Leong, Ben Koop and Steve Perlman - How to kill a parasite: transcriptional responses in a *Drosophila* defensive symbiosis.

1145-1200 **Melissa Orobko**, Bernard Roitberg & Franz Simon - Population dynamics of a tritrophic food chain in a warming world: a modeling approach.

1200-1215 **Jennifer Scholefield**, Ikkei Shikano, Vincent Fung & Jenny Cory - Exploring the temporal and dose dependent immune response to baculovirus in an insect.

1215-1315 LUNCH (Lunch provided)

### Third session (Moderator: Bill Riel)

1315-1330 **Yasmine Norouzi**, Jenny Cory & David Gillespie - How do entomopathogenic fungi and parasitoids interact over a long term to control aphids in greenhouses?

1330-1345 **Sean McCann**, Onour Moeri, Tanya Jones, Catherine Scott, Grigori Khaskin, Regine Gries, Sean O'Donnell, Gerhard Gries - A social raptor exploits the absconding response of Neotropical social wasps in order to prey on their nests.

1345-1400 **Christina Hodson** & Bernard Roitberg - *Anopheles gambiae* alters blood-feeding behavior in response to a host protected with the new repellent 3c(3,6).

1400-1415 **Tina Dancau** - We can't be friends: Interspecific aggressive competitive behaviour of *Drosophila suzukii* and *Drosophila melanogaster* females when forced to share a common resource.

1415-1445 COFFEE (Coffee and refreshments provided)

### Fourth session (Moderator: Tracy Hueppelsheuser)

1445-1500 **Samuel Robinson** & Greg Henry - Insect Community Dynamics in a High Arctic Ecosystem.

1500-1515 **Sebastian Ibarra**, S. McCann, Regina Gries, Huimin Zhai, & Gerhard Gries - Pheromone-mediated defensive behaviour of *Dolichovespula maculata*.

1515-1530 **Dennis Quach**, Joscelyn McKenzie & David Gillespie - Patch size and temperature interaction effects on the predation of pea aphid (*Acyrthosiphon pisum*) by the Asian Ladybird Beetle (*Harmonia axyridis*).





1530-1545 **Alpha Wong**, Peter Constabel & Steve Perlman - Effects of poplar phenolics on the fitness and behaviour of *Chaitophorus* aphids.

1545-1620 ESBC Business Meeting

1620-1630 Announcement of student presentation winners

## Agenda: ESBC Annual General Meeting November 1, 2013

Date: November 1, 2013

Location: Pacific Forestry Centre, Victoria.

1. Approve Agenda

2. Executive Reports:

- Grad Student Rep, Ikkei Shikano
- Regional Director of the National Society, Bill Riel
- Editors:
  - Boreus, Gabriella Zilahi-Balogh
  - Website, Alex Chubaty.
  - Journal, Dezene Huber
- Interim Secretary, Tracy Hueppelsheuser
- Treasurer, Max Salomon
- President, Ward Strong

5. Vote: Honorary Membership for Rob Cannings

Vote: Changes to Bylaws. The bylaw changes were posted on the ESBC website and on the Facebook Page; due to our problems with the membership list it was not possible to send them directly to each member. Vote will be by show of hands; acceptance of the changes requires approval of 3/4 of the members present.

3. Graduate Student Scholarship: recipient presentation

4. Student Paper Awards presentations

5. Results of Executive Election

6. Transfer of Presidency

7. Adjourn.

## Student winners



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



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



Student Winner of Contech PhD Student Award: Phineus 'Finn' Hamilton (UVic) for presentation at AGM



Catherine Scott, receiving Graduate Student Scholarship for Travel from outgoing president, Ward Strong. Photo Credits: G. Zilahi-Balogh



Robb Cannings shaking the hand of outgoing president Ward Strong after being voted in as Honorary Member of ESBC at the AGM. Robb Cannings retired in 2013 as Curator of Entomology at the Royal British Columbia Museum (RBCM). He has been a major contributor to both ESBC and entomology in BC for most of his professional life. Photo Credits: G. Zilahi-Balogh



Mike Smirle, incoming President of ESBC shaking the hand of outgoing president, Ward Strong. Photo Credits: G. Zilahi-Balogh



## Minutes: ESBC Annual General Meeting November 1, 2013

Prepared by: Tracy Hueppelsheuser, Secretary

1. Agenda: Add adhoc report on ESBC library from Vince Nealis.  
Approval of agenda: moved Robb Bennett, 2<sup>nd</sup> by Rob Cannings. Carried.
2. Executive Reports below. Highlights and comments are as follows:
  - a. Adhoc Library report: Vince Nealis, presented by Ward Strong. Our library is unique, useful, and relevant. Pacific Forestry Center (PFC) library is closing, which is where the ESBC library is housed. PFC will maintain space for our holdings, but we need to manage it, handle library requests, and cataloguing. Currently, volunteers manage the holdings. Society will need to address long term maintenance.
  - b. Grad Student Representative, Ikkei Shikano. Proposal for summer/spring workshop/event on insect collection, identification, photography, as a means to gain more technical expertise, network, and have fun. Speaking of networking, Tanya S was tweeting all day!
  - c. Regional Director of the National Society, Bill Riel. New governance/legislation of national society, lots of exciting upcoming national and international entomology events.
  - d. Editors:
    - i. Boreus, Gabriella Zilahi-Balogh: publishes 2 times per year, June and December. Please send photos, articles, etc. Upcoming deadline: Dec 15 for Dec 2013 publication.
    - ii. Website, Alex Chubaty: Initiated meeting registration online, seemed to go well. Alex and a team of volunteers have prepared all volumes of the journal and Boreus for online posting; all are up now.
    - iii. Journal, Dezene Huber: Proposes to go fully paperless soon with our journal. Currently, journals are posted online, but we still make some paper copies.
  - e. Secretary (interim), Tracy Hueppelsheuser: stepped in during late summer 2013, after previous secretary, Leo Rankin, resigned after some years of service to the Society.
  - f. Directors: Tracy Hueppelsheuser and Susanna Acheampong: Will work together to initiate the Public Encouragement Grants for schools over the winter, which awards small grants to stimulate an interest in entomology through public education. This is a national society initiative.





g. Treasurer, Max Soloman: The Society remains in good financial health.

h. President, Ward Strong.

Reports accepted as read, moved Lee Humble, 2<sup>nd</sup> by Bernie Roitberg, carried.

3. Vote: Honorary Membership for Rob Cannings. Nominated by Robb Bennett. Moved by Ward Strong, 2<sup>nd</sup> by Gabriella Zilahi-Balogh, carried. Congratulations and thank you to Rob for many years of contribution to the Society and to entomology in British Columbia!
  4. Vote: Changes to Bylaws as proposed by executive. Proposal is posted on website for review. Main change was format of executive to decrease the total number of executive and add a 2<sup>nd</sup> vice president to allow for better succession. Removal of Past President position, therefore, any duties for this position need to be re-assigned by executive, i.e. treasury audit has historically been done by Past President. Moved to accept changes by Ward Strong. 2<sup>nd</sup> by Karen Needham. Carried (100% in favour, none opposed).
  5. Graduate Student Scholarship for Travel: Mike Smirle (Vice President) lead the judging team. Awarded to Catherine Scott. Congratulations to Catherine!
  6. Student Paper Awards for presentation at today's AGM: Presented by Rob McGregor (Past President). Congratulations to all winners today!
    - a. Undergraduate Award: Selena Dhanani (SFU)
    - b. James Grant North Okanagan Naturalist Club Masters Student Award: Grant Olsen (SFU)
    - c. Contech PhD Student Award: Phineus Hamilton (UVic)
  7. Results of Executive Election:
    - a. Directors: Marla Scharzfeld, Renee Prasad
    - b. Secretary: Tracy Hueppelsheuser
    - c. President Elect: Steve Pearlman
  8. Transfer of Presidency. Ward Strong to Mike Smirle.
  9. Adjourn.
-





## President's Report

Submitted by Ward Strong

2013 been an adventurous year for the ESBC, with some major changes accomplished and more in the works. In no particular order:

Alex Chubaty's project to digitize back-issues of the JESBC has been nearly completed; he has organized a fleet of student volunteers to check the digitization for accuracy and enter the metadata in the online database. Kudos go to Alex, and honoraria in appreciation of their efforts go to the volunteers.

PayPal payment system can now be used to pay for membership as well as AGM registration and Journal charges. Online payment is a great way to track membership information and predict meeting attendance.

The ESBC Library will continue to be housed at the Pacific Forestry Centre, and we are grateful to Vince Nealis for his ongoing efforts to arrange maintenance and interlibrary loans.

Our Secretary Leo Rankin sort of disappeared last spring, along with all his records, holdings, and JESBC back issues, leaving us in the lurch for membership records and journal mailouts. Fortunately, director Tracy Hueppelsheuser has stepped up as interim Secretary; with her efforts and those of treasurer Max Salomon and JESBC editor Dezene Huber we have mostly brought ourselves up to snuff. Recently Leo did deliver most of the print material to Tracy, however our full membership list has still not been recovered. As the membership is reconstructed by personal contact and online payments, membership and contact information will be stored on a secure server so that this situation will not recur.

We decided to decline an invitation to list with EBSCO, a for-profit journal listing service, in order to maintain our dedication to a free, open-access journal.

The Entomological Society of America has decided to host their 2018 AGM in Vancouver. This is the year that the next ESBC / ESC JAM is to be held in BC. The ESC has agreed to co-host the ESA in Vancouver; your Executive decided to join in and co-host the JAM with the ESA. This will be a major meeting with 3 entomological societies, so mark it in your calendars, sometime in the fall of 2018.

We are excited to be publishing an Occasional Paper, the Checklist of Lepidoptera of BC, on the 50th anniversary of the previous edition, published in 1963. Of the five authors, 3 are members of the ESBC: Rob Cannings, Dave Holden, and Geoff Scudder. JESBC editor Dezene Huber has seen it through peer review, and it is now accepted and ready



for typesetting.

I'd like to thank outgoing Boreus editors Jenny Heron and Jeremy DeWaard for their years of excellent newsletters; if the first newsletter (June 2013) of our new Editor Riella Zilahi-Balogh is any indication we're in for many more excellent issues.

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## Regional Director's Report

Submitted by Bill Riel

The Entomological Society of Ontario hosted a very successful Joint Annual Meeting with the Entomological Society of Canada from October 20<sup>th</sup> to the 23<sup>rd</sup>, 2013

As of this meeting, Rebecca Hallet becomes the new president, and BC's Staffan Lindgren steps up to first vice president.

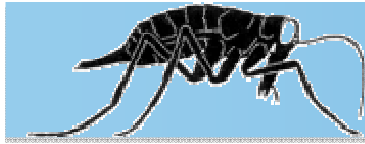
Also at this year's AGM the ESC formally began the transition from the old Canada Corporations Act to the new Canada Not-for-profit Corporations Act. This has proven to be a substantial undertaking, and the ESC has struck an ad-hoc committee chaired by Bill Riel to guide the society through the process.

New Bylaws and Articles of Continuance have been written and approved by the ESC membership. These will be filed with Corporations Canada and a new era of governance begins for the ESC.

As noted in previous reports, the major impact on regional societies is the election of Regional Directors: under the new act, these positions must be elected by the membership of the ESC, not by the regional society. Regional societies will still be asked to nominate candidates for this position which will be voted on by the ESC membership as a whole.

This change may require an examination and discussion of the ESBC bylaws describing this position as there is a subtle shift in responsibilities. In the future, the Regional Director will legally be a director of the ESC Corporation, elected by the ESC, so it will be important that the ESBC bylaws are compatible with this.

The ESC has requested that all current Regional Directors continue in their duties until the transition is complete and a new voting system is in place. Likely that would take place at the AGM in 2014, but it's possible it could be a longer term.



The 2014 ESC annual meeting will be held in Saskatoon, Saskatchewan from September 26<sup>th</sup> to October 1<sup>st</sup>.

The ESC is going to host its annual meeting in 2015 in Orlando, Florida as a part of the International Congress of Entomology. Specific details and dates for this meeting to be announced.

In 2018, it will be British Columbia's turn to host the JAM. That year, the Entomological Society of America will be hosting their annual meeting in Vancouver from November 11<sup>th</sup> to 14<sup>th</sup>. The ESC and the ESBC executive have voted in favor of holding a joint meeting with the ESA at that time. Again, more dates and details will be forthcoming.

---

## Web Editor's Report

Submitted Alex Chubaty

It's been a busy year, and we've managed to make substantial progress with our various online projects. Our biggest successes have been through the shift to the new online journal system, where we have seen our web traffic increase from 1179 visitors in 2012 to 4181 visitors this year (as of 30 October 2013) – more stats attached to this report. We continue to make more of our past archives available through the new journal site, and have made substantial progress with the help of several great volunteers. I especially wish to acknowledge the hundreds of hours put into this project over the summer by our undergrad volunteers Laura O'Neill, Melissa Englouen, Daniel Katalic, Charles Wang, and Cindy Yu. As previously agreed upon by the executive. Max and I are working on issuing each of them an honorarium for their efforts.

As our archives continue to be posted online, I'll be including them in a public Mendeley Group library (link below), which allows anyone to browse and search our database through the Mendeley website and in Mendeley Desktop. (Reminder, we have a Mendeley citation style!)

In addition to electronic membership registration and PayPal support to our website for payment of membership dues (<http://entsocbc.ca/membership/>), our website now offers online meeting registration. It will be interesting to see the proportion of online registrants versus "walk up" registrations. Hopefully, most attendees will have registered online – this gives us a better idea of the numbers to expect for meetings, which allows us to better estimate catering and other event needs.

An ongoing issue the Society has been dealing with has been how to best transition Society records and other administrative duties when there is a change to the



Executive. Having previously relied primarily on paper hardcopies, this has posed numerous challenges over the years, and we have discussed modernizing (i.e., digitizing) and centralizing membership and exchange partner databases to best serve the needs of our membership. We are currently in the process of assessing our needs and evaluating how best to meet them. Certainly, online member and meeting registration has improved the situation dramatically, and we look forward to updating all our membership practices.

Due to time restrictions, I haven't had a chance to deal with a few items, but they remain on my to-do list for next year:

- We had discussed setting up Digital Object Identifier (DOI) cross-referencing for all our journal content, as well as getting 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.
- David Shorthouse is following our journal digitization efforts and volunteering from Ontario. He has developed an online tool for searching taxonomic data from articles, and has produced a database containing all of the taxonomic references from our journal archives. We hope to make use of this database to provide a “search by taxon” feature on the journal site.
- Transfer our main word press site (entsocbc.ca) off the SFU group blogs server in order to facilitate core software updates and feature enhancements (including member profiles, and members-only content).

On a personal note, I'd like to announce that I've successfully defended and submitted my PhD thesis. I'll be starting a postdoc in January 2014 at the Pacific Forestry Centre with Eliot McIntire developing individual based models of mountain pine beetle outbreaks, looking at landscape-level population forecasting. I am looking forward to continue serving the Society and complete the work I've started to shift towards digital and online communication and journal publication.

Alex Chubaty

Web Editor

**Follow us on the web:**

Website <http://entsocbc.ca>

Facebook <http://goo.gl/jPqvX>

LinkedIn <http://goo.gl/eyHjk>

Mendeley <http://mnd.ly/WROZMb>

Twitter [@EntsocBC](#)



City	Visits	% New Visits	Bounce rate	Pages Per visit	Av. Visit Duration
1 Prince George	205	20.98%	34.63%	11.55	00:06:27
2 Vancouver	194	75.26%	61.86%	3.31	00:01:57
3 Burnaby	192	36.98%	32.81%	21.49	00:09:32
4 Victoria	192	58.33%	44.27%	5.3	00:04:04
5 Palo Alto	136	99.26%	100.00%	1	00:00:00
6Ottawa	119	63.03%	37.82%	4.71	00:04:20
7 (not set)	84	94.05%	76.19%	1.45	00:01:05
8 Edmonton	59	59.32%	47.46%	3.81	00:02:40
9 Surrey	59	81.36%	71.19%	2.32	00:00:48
10Calgary	49	71.43%	57.14%	4.27	00:03:20
11Richmond	48	87.50%	72.92%	2.02	00:00:47
12 Kelowna	47	85.11%	72.34%	3.21	00:01:39
13 Sault Ste. Marie	41	29.27%	9.76%	6.02	00:03:05
14 Toronto	39	89.74%	79.49%	1.79	00:01:04
15 Sherbrooke	35	0.00%	31.43%	7.69	00:03:16
16 Vernon	31	64.52%	58.06%	2.55	00:01:24
17 Beijing	29	68.97%	41.38%	2.17	00:02:14
18 Seattle	29	48.28%	34.48%	7	00:02:19
19Montreal	24	95.83%	58.33%	2.58	00:01:05
20 Fayetteville	24	33.33%	12.50%	11.29	00:07:34
<b>TOTAL</b>	<b>4181</b>	<b>73.64%</b>	<b>55.61%</b>	<b>4.66</b>	<b>00:02:36</b>

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## Journal Editor's Report

Submitted by Dezene Huber

The 2012 edition (Vol. 109) was printed and mailed to the existing list of member subscribers. We are still trying to untangle the various institutional and exchange partner subscription problems that have arisen. Tracy, Max, and I are currently spending a great deal of time on this.

Vol. 110 will likely contain three articles and two notes plus abstracts from the annual meeting regular talks and symposia (thanks to Rob McGregor for taking on the abstract collection and formatting task again this year).

Thanks to all associate editors, our excellent copyeditor and layout editor, and our intrepid web editor for all of their tireless work for JESBC.

The ongoing difficulty and general consumption of time and resources associated with getting paper copies out to various parties highlights the fact that a shift to a no-paper delivery system (i.e., completely electronic) would be preferable, both in terms of workload for various Society executive members and also in costs. What follows is a document on this subject that was put



together by Alex C. with input from Ward S. and me (note, please find an online version of the document at this URL: <http://simp.ly/publish/COISCF> ).

## Complete digitization of JESBC

### Background

The Society has a long publishing history, starting with the publication of ten Quarterly Bulletins from 1906-1908, followed by the first volume of the Proceedings in 1911. The Proceedings were published annually, and in 1956 (volume 52) were officially renamed to the Journal of the Entomological Society of BC.

Last year's (2012) volume of the Journal (vol 109) was published in May 2013, highlighting a major challenge the Society has faced over the last century: actual publication dates rarely coincide with the issue date of each volume (see [Leech 1942](#)). Recently, our annual submission deadline results in annual 'publication push' that results in a single 'crunch time' leading up to publication.

Furthermore, over the years, each editor handled submissions in different ways; via post, fax, and more recently email. Until very recently, digital copies were not available to the membership, nor were they retained by the Society, but rather by individual editors. As of 2011, only a few issues of JESBC were available online, with only the most recent issues available as PDFs (2003-2010). None of these were easily searchable, nor were these issues indexed on our site, Google Scholar, or other search engines.

Another major challenge facing the Journal has been maintaining positive relationships with our Journal Exchange Partners, who, in exchange for hardcopies of our publications, provide us with hardcopies of their own. Timely distribution of our journal and newsletter to our partners, in addition to limited capacity to manage our extensive library holdings and follow-up with our partners have hampered our Society's efforts to maintain these exchange relationships.

It was with these limitations in mind that the Executive initiated an effort (led by Alex Chubaty) to bring the JESBC into the 21st century, with the goals of: (1) simplifying the submission, editorial, and publication process; and (2) provide complete open access to our entire journal archive in an effort to increase our journal's profile, readership, and citations.

Specifically, by transitioning toward an entirely digital system we aim to address the following: NOTE: these aren't in any particular order, and some may fit within the scope of others

1. streamline the Journal submission system and editorial workflows;





2. reduce and eliminate bottlenecks in the publication process;
3. improve timeliness of Journal publication;
4. improve timeliness of Journal distribution to Exchange Partners;
5. raise the profiles of the Journal and the Society;
6. expand Journal readership;
7. collect Journal article citation data to determine citation metrics (e.g., Impact Factor);
8. reduce the workload for our library volunteers;
9. ensure the Society maintains repository of Journal archives for internal use; including Editorial decisions and correspondence;
10. create an online database of all past Journal archives for public use;
11. must be searchable;
12. must be indexed via common search tools (e.g., Google Scholar, Web of Science, etc.);
13. must be persistent (i.e., links to PDFs can't keep changing);
14. reduce publishing costs;
15. Expanding our digital presence

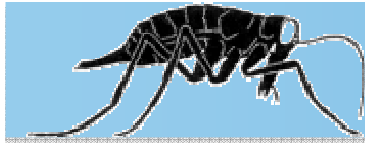
In the fall 2011, in conjunction with the Library at Simon Fraser University and the [Public Knowledge Project](#), we began our transition to our new online journal management system and the scanning and uploading of all volumes of the JESBC, and we implemented our new online journal management system.

### **Scanning and digitizing our journal archives**

Thanks to Peter Belton and Leo Rankin, we were able to track down hardcopies of all Quarterly Bulletins as well as all volumes of the Proceedings and Journal. SFU Library staff, in particular Ian Song, completed the scanning of these archives in August 2012, having also done the tedious work of creating separate PDF files for each article in each issue. [Numerous volunteers](#), including several ESBC members, have gone through each article and extracted (and corrected) metadata in preparation of importing each article into our new journal management system.

### **Our new journal management system**

Our choice of journal management system was based on several important criteria: cost, features, ease-of-use, robustness, “future-proofing”, and support. Moving to this new system



now allows us to publish using a continuous submission model, so that articles appear online as they are accepted for publication, as well as provide a streamlined publication work-flow and centralized database. Most of our Journal archives have now been imported to the new system, which is hosted and serviced by the SFU Library, and is available at [our new Journal site](#). Thanks to an [incredible team of volunteers](#), we expect to have all articles uploaded by August 2013.

### **Submission, review, and editorial workflow**

Since fully implementing this journal management system, articles have moved more smoothly through the review, revision, copyedit, and layout steps. Prior to this the editor had to maintain spreadsheets or other such systems to track articles. Articles were being emailed back and forth and there was always potential for confusion or for articles to be lost in the shuffle. While some of us are still learning all of the features of the new system, the pros vastly outweigh the cons. In addition the system provides a complete record of all correspondence pertaining to any given submission, which is vital at several steps during the process.

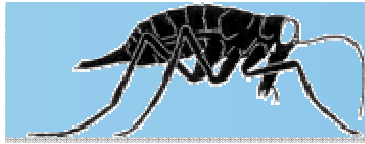
### **Going completely digital**

All of the electronic changes have been great; the question is, do we want to take this further?

All of the paper copies (and all that go with them) is, as far as I can see, the rate limiting reaction for this journal. Of course, there are a few who really still want their paper copies for various reasons, and I can't argue against that too strenuously as they have good reason (including, I'd guess, personal preference and tradition). But, I think that it would be great if we could finish the push of JESBC towards a PLoS/PeerJ/F1000 type of entity where there are no print copies and where there are even no volumes and issues. just papers published online as they are completed.

### **What about archival copies for libraries?**

This is a question that needs to be discussed. It is a fact that there are numerous journals that are now fully electronic, with the only paper copies being those PDFs printed out by readers (e.g. PLoS, PeerJ, F1000, and many others of lower profile). In addition the [ICZN now allows](#) solely electronic publication of taxonomic findings/changes/etc. We plan to digitally archive JESBC via [LOCKSS](#) (Lots of Copies Keep Stuff Safe), which is a well-recognized and highly utilized digital repository that ensures ongoing existence of journal articles even if a society or journal becomes extinct. The reality is that paper archives of past material are relevant and useful but, going forward, archives are going to head further into the digital realm. Another reality is that paper copies are at least as vulnerable to loss (fire, flood, theft, closure of libraries, etc.) as are electronic copies. LOCKSS is a distributed system that ensures that even if one part of the system vanishes, copies kept elsewhere will still exist.



**Pros:**

- No more late issues.
- No more print costs (>\$1000/year).
- No more mailing.
- No more mailing costs (a few \$100/year).
- No more paper (green!)
- We're already set up for it with OJS.
- It's the way things are going anyway (e.g. PLoS, PeerJ, F1000, others).
- LOCKSS (Lots of Copies Keep Stuff Safe) is a highly secure method of backup.
- ICZN allows online-only publication of new species: [link](#)
- No more ongoing requests from libraries and partners for missing issues... this is a huge time sink.
- Less need to worry about physical space to house/store everything.
- More accurate tracking of reads, downloads, citations. *citation metrics are really important*

**Cons:**

- Loss of "paper" contact with exchange partners... but our library is having problems as it is, most of our exchange partners' material will be or already is online, and we don't actually receive as much from our partners as we should.
- Tradition.
- Some people would rather read from paper (although our actual print subscriptions are at the bare minimum now)
- Further archiving required beyond LOCKSS? But, the internet is inherently distributed.
- The extinction of "issues."
- Once we go this way, it's unlikely that we'd ever go back to paper. Not impossible, of course. But the question also is, why would we go back?

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## Treasurer's Report

Submitted by Maxence Salomon, 30 October 2013

This year was a transition year for the society's treasury. I took over from Lorraine MacLauchlan in November 2012 and moved all the treasury operations from Kamloops to the Lower Mainland. The society's main account is now based at the Bank of Montreal.

To date, 82 members have paid their membership dues for 2013 and the society has 11 honorary members. The majority of these members used the new online payment system linked to the society website and paypal.



Our main revenues came from membership and subscription dues, JESBC page charges, registration to the AGM or Symposium and the publication of the checklist of Lepidoptera in B.C.

Our main expenses for 2013 were related to the printing, typesetting, digitization and electronic archiving of the JESBC.

The current balance in our society's chequing account is \$11,505.96. Our savings assets are invested as term deposits that will mature either in 2014 or 2016 (current value is \$45,760.43).

Savings assets maturing in 2014 will be re-invested.

Period covered: November 2012 - October 2013

#### Assets

Item	CAD
October 9, 2012	
Chequing account balance	10,846.63
Savings assets in the bank	35,409.55
October 30, 2013	
Chequing account balance (BMO)	11,505.96
Savings assets in the bank (BMO, Interior Savings)	45,760.43

#### Revenue

Item	CAD
Membership/Subscription dues for 2013 and some for 2012	2714.00
James Grant Award from North Okanagan Naturalists Club	400.00
Page charges for 2012 JESBC	3150.00
Publication of "Checklist of Lepidoptera of British Columbia, Canada"	3500.00
Registration dues for 2013 AGM and Symposium	1700.00
<b>Total Revenue</b>	<b>11,474.00</b>

#### Expenditures

Item	CAD
Student awards at 2012 AGM in Summerland. Scott Johnson, Gigi Hoi, Alex Chubaty, Ikkei Shikano	1600.00
Costs of 2012 AGM and Symposium in Summerland	1063.52
Printing of JESBC (UNBC Copy and Publishing Services)	1164.80
Digitization of 6858 pages of JEBC (SFU Library)	1920.24
Typesetting for JESBC (Tanya Stemberger)	1125.00
Honoraria for work in ESBC Library (David Smith and Alice Solyma)	500.00



Honoraria for students working on the extraction and uploading of JESBC electronic archives at SFU and UNBC (Melissa Englouen, Charles Wong, Cindy Yu, Laura O'Neill and Daniel Katalinic)	2050.00
Student Award for best BSc student presenter at 2013 AGM	200.00
Banking service charges	39.54
Postal costs	19.85
<b>Total Expenditures</b>	<b>9682.95</b>

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## Graduate Student Representative Report

Prepared by Ikkei Shikano

The ESBC was well represented at the Joint Annual Meeting of the Entomological Societies of Canada and Ontario with 10 graduate students from BC giving oral presentations (all from SFU). Two of those students won President's Prizes for their presentations.

Thank you everyone for coming out to support the ESBC Annual General Meeting and Symposium this year! The turnout was phenomenal and student attendance was really high. Special thanks to the two PhD, nine MSc, and four BSc student presenters! I believe the ESBC website, the ESBC Facebook group and Twitter feed have contributed to the increased involvement of students.

My goal this year as Graduate Student Representative is to organize a ESBC student social or workshop during the beginning of summer. The plan is to have a casual get-together including catching and photographing insects, and have a picnic. It would be a good way for everyone to remind themselves why they fell in love with entomology. Details will be posted on the ESBC facebook page, so stay tuned!

As we discussed at the last executive meeting, I would like to pursue Alex Chubaty's idea of having a membership directory on the ESBC website, with an option for a profile page for any member who would like one. This would be an excellent resource for students to search for potential supervisors and collaborators. It would also encourage members to pay their annual membership fees to maintain their profile on the ESBC website.

If possible, I would also like to make AGM abstracts available online several days before the AGM to encourage more members to visit our website.

Ikkei

ishikano@sfu.ca



## Boreus Editor's Report

Thank you to those who submitted to this edition of Boreus. Please keep the submissions coming. I welcome photos and anything you would like to share regarding entomological pursuits. I will strive to get the Boreus out in a timely manner. Boreus is published June and December.

Gabriella



Mountain ash sawfly, *Pristiphora geniculata* (Htg.) (Hymenoptera: Tenthredinidae)





# ENTOMOLOGICAL SOCIETY OF BRITISH COLUMBIA



## SYMPOSIUM:

# "THE RISE AND FALL OF THE HONEYBEE"

**Date:** Saturday, November 2, 2013

**Time:** 9:00 am - 4:30 pm

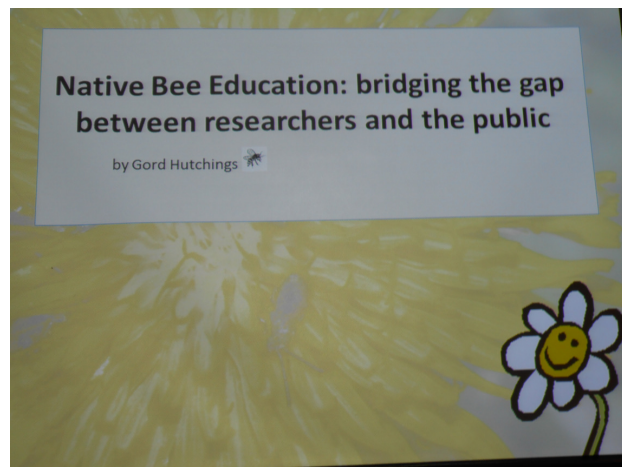
**Location:** Pacific Forestry Centre, 506 W. Burnside Rd, Victoria BC

**Entry:** \$30 includes lunch

Time	Speaker	Title
8:30	CONVENE, coffee, tea & muffins	
9:00	<b>Ward Strong</b> , President, ESBC	Welcome and Introduction.
9:10	<b>Heather Clay</b> , former Chief Executive Officer of the Canada Honey Council.	"Trends in managed pollinators and the resurgence of urban beekeeping".
9:45	<b>Paul van Westendorp</b> , Provincial Apiarist, BC Ministry of Agriculture.	"Colony Collapse Disorder, Farm Chemicals, and Pollinator Decline".
10:30	COFFEE, tea & good eats	
11:00	<b>Dr. Cory Sheffield</b> , the Royal Saskatchewan Museum.	"Native pollinators and the Diversity of Bees".
11:30	<b>Gord Hutchings</b> , Hutchings Bee Service, Victoria.	"Native Bee Education: bridging the gap between researchers and the public".
12:00	LUNCH, served in the cafeteria next door	
1:00	<b>Don Fowler</b> , Contech Inc, Victoria BC.	"The Long Arm of the California Almond Industry"
1:45	<b>Catherine Culley</b> , President, Capital Region Beekeepers Association.	"Re-opening Pandora's Hive - The risks of importation of honeybee packages from the U.S. to Canada"
2:20	<b>Heather Higo</b> , Canadian Food Inspection Agency	"Decision-making by the Canadian Food Inspection Agency"



2:30	COFFEE, tea & good eats	
3:00	<b>Dr. John Borden</b> , Contech Inc, Delta BC.	"Superboost"
3:45	<b>Heather Higo</b> , Canadian Food Inspection Agency	"Bee Integrated Pest Management"
4:30	ADJOURN	





## New ESBC Executive

### Marla Schwarzfeld, Director

I received my B.Sc. in Biology and Environmental Studies from the University of Victoria in 2001. I then worked for approximately 2 years in a freshwater ecology lab at UVic, with a 6-month interruption spent travelling in Central America. This was followed by 3 years spent working as an entomologist on a conservation research project based in Volcano, Hawai'i, with an emphasis on the interactions between endangered birds and native and non-native insect communities. In 2006, I began my Ph.D. research at the University of Alberta, under the supervision of Dr. Felix Sperling; my work focused on the systematics and diversity of Ichneumonidae, with an emphasis on the genus *Ophion*. I am currently a post-doctoral fellow at UNBC, working with Dr. Dezene Huber on freshwater invertebrate biodiversity in relation to natural gas pipeline construction. I am honoured to be a director of ESBC and am looking forward to contributing in any way I can.



### Renee Prasad, Director

Renee currently works at E.S. Cropconsult Ltd. doing crop monitoring and on-farm research on pest control. She also is a sessional instructor at University of the Fraser Valley in the Agriculture department and teaches pest management. Renee got her Ph.D. from Washington State University with Bill Snyder and her M.P.M from S.F.U. with Bernie Roitberg.

### Mike Smirle, President

I am a lifelong resident of British Columbia, born and raised in the small farming community of Bradner (now part of the City of Abbotsford). I attended UBC (BSc) and SFU, where I obtained my MPM and PhD, studying the biochemical mechanisms of insecticide resistance in honey bees under the direction of Mark Winston. After completing an NSERC Post-Doctoral Fellowship in Murray Isman's lab at UBC, and working as a Sessional Instructor at SFU, I was appointed a Research Scientist with Agriculture and Agri-Food Canada in Summerland in 1990. My research has been focused on insect toxicology, insecticide resistance management, and IPM in orchard crops and grapes, as well as work on the environmental fate of new insecticides. Recently my research has been centered on the biology and management of spotted-wing drosophila. I am currently the Test Site Manager for the Minor Use Program at Summerland. I have been a member of the ESBC for many years, and have served as a Director in 1994-1996 and 2006-2008. I feel honored to serve as President of the ESBC.





## 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](http://www.esc-sec.ca/students/Directory_of_Entomology.pdf)

### Research Opportunities – visit ESC website

**M.Sc.: The landscape ecology of the spread of the apple maggot, *Rhagoletis pomonella*, an invasive insect in the Pacific Northwest**

Department of Biology, University of British Columbia, Okanagan Campus, Kelowna

Starting date: January 2014

Contact: [jason.pither@ubc.ca](mailto:jason.pither@ubc.ca)

**M.Sc.: Aspects of *Drosophila suzukii* population dynamics.**

Department of Biology, University of British Columbia, Okanagan Campus, Kelowna

Starting date: January 2014

Contact: [robert.lalonde@ubc.ca](mailto:robert.lalonde@ubc.ca)

**Postdoctoral Research Associate in Forest Insect Ecology**

Canadian Forest Service – Atlantic Forestry Centre in Fredericton, New Brunswick.

Starting date: January - April 2014.

Contact: [rjohns@nrcan.gc.ca](mailto:rjohns@nrcan.gc.ca)

( <https://docs.google.com/document/d/1VnqKp2JeB81ubMe-xDTMdrpVGK-hAdDC6porc1RCumk/edit?usp=sharing> )

**PhD position in parasitoid behavior, ecology, and biological control**

Colorado State University

Deadline to apply: 1 January 2014

Starting date: Spring of 2014

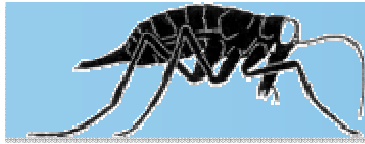
Contact: [paul.ode@colostate.edu](mailto:paul.ode@colostate.edu)

**Graduate assistantship in Russian knapweed biological control**

Colorado State University

Deadline to apply: 1 January 2014

Contact: [paul.ode@colostate.edu](mailto:paul.ode@colostate.edu)



**M.Sc. or Ph.D.: Host-parasite interactions: Ecological and evolutionary shifts toward parasitism**

Department of Biological Sciences, University of Alberta

Starting date: September 2014

Contact: [lienluong@ualberta.ca](mailto:lienluong@ualberta.ca)

**Ph.D: Chemical ecology of insect plant interactions**

University of Alberta, Department of Renewable Resources

Starting date: January 2014

Contact: [erbilgin@ualberta.ca](mailto:erbilgin@ualberta.ca)

( <https://ales-ssl.ales.ualberta.ca/GradPositions/Position/StudentDetails/48>)

**Ph.D: interface between host tree quality and host selection by adult mountain pine beetles, and the subsequent overwintering physiology and survival of their larvae.**

This project is well-funded for multiple years and is associated with a productive and well-established research network.

University of Northern British Columbia

Contact: Dezene Huber [huber@unbc.ca](mailto:huber@unbc.ca)

<http://blogs.unbc.ca/huber/2013/10/08/searching-for-a-promising-scholar/>

## 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](mailto:dsteinke@uoguelph.ca) and blog website <http://dna-barcoding.blogspot.ca/>

## Entomological Society of Canada

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

September 2013 Bulletin available online at [http://www.esc-sec.ca/bulletin/bulletin\\_sep\\_2013.pdf](http://www.esc-sec.ca/bulletin/bulletin_sep_2013.pdf)

Ninth Annual Photo Contest Winning Photos posted <http://www.esc-sec.ca/photocontest13.php>



## New Books

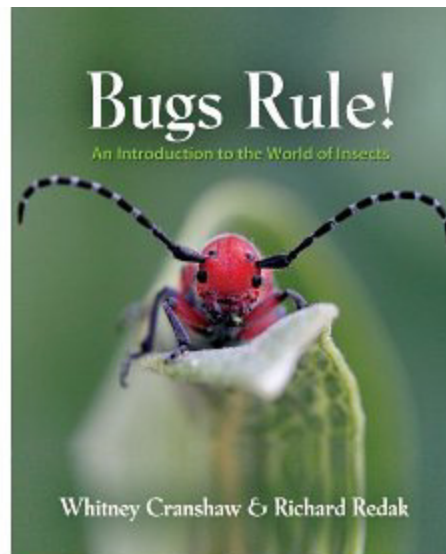
*Bugs Rule! An Introduction to the World of Insects* is designed to be used for teaching entomology to non-science majors – sort of hybrid of a standard entomology text with some of the more natural history oriented entomology books (e.g., *Bugs in the System*, *Life on a Little Known Planet*). It also could be useful for cramming for the Linnaean Games.

Retail is \$55, a pretty good deal, I think, for a hardcover textbook with some 950 images.

If you are considering the possibility of using in this in some teaching capacity you can request a free online digital copy at:

<http://princeton.einspections.eb20.com/Requests/Step1/9780691124957>

If you live in the US or Canada, I may also be able to arrange a hard copy for you if you might use it in teaching. If so contact me directly: [Whitney.Cranshaw@ColoState.EDU](mailto:Whitney.Cranshaw@ColoState.EDU)).







## Professional Development Opportunities

**Weevil Course** offered in August 2014. Check back at <http://research.amnh.org/swrs/weevil-course> for future information.

## Some International Entomological Societies

Royal Entomological Society [www.royensoc.co.uk/](http://www.royensoc.co.uk/)

Entomological Society of Southern Africa [www.entsocsa.co.za/](http://www.entsocsa.co.za/)

Egyptian Entomological Society [www.ees.eg.net/](http://www.ees.eg.net/)

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

Xerces Society for Invertebrate Conservation [www.xerces.org](http://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/>



## 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](http://www.entsoc.org/Pubs/Periodicals/News/submit_datebook) for details.

### 2014

**The 25th USDA Interagency Research Forum on Invasive Species** will be held January 7-10, 2014 in Annapolis, MD. Contact Katherine McManus at [kmcmanus@fs.fed.us](mailto:kmcmanus@fs.fed.us).

**Mechanisms and Consequences of Invertebrate-Microbe Interactions** will be held January 26-30, 2014 in Tahoe City, California. Contact [yvonnep@keystonesymposia.org](mailto:yvonnep@keystonesymposia.org).

**The ESA Southwestern Branch Meeting** will be held February 24-27, 2014 in San Antonio, TX.

**The ESA Southeastern Branch Meeting** will be held March 1-5, 2014 in Greenville, SC.

**The ESA North Central Branch Meeting** will be held March 9-12, 2014 in Des Moines, IA.

**The ESA Eastern Branch Meeting** will be held March 15-18, 2014 in Williamsburg, VA.

**The Southeast Regional Mosquito Control Workshop** will be held March 10-11, 2014 in Panama City, Florida. Contact [docmx8@gmail.com](mailto:docmx8@gmail.com).

**The 11th Arbovirus Surveillance Mosquito Control Workshop** will be held March 25-27, 2014 in St. Augustine, FL.

**The International Conference on Biopesticides: Current Status and Future Prospects** will be held April 1-3, 2014 in Alexandria, Egypt. Contact [icb@alexu.edu.eg](mailto:icb@alexu.edu.eg) or [Samir1969us@yahoo.com](mailto:Samir1969us@yahoo.com).

**The ESA Pacific Branch Meeting** will be held April 6-9, 2014 in Tucson, AZ.

**The 21st Biennial International Plant Resistance to Insects Workshop** will take place April 14-18, 2014 in Marrakech, Morocco. Contact [ipri2014logistics@gmail.com](mailto:ipri2014logistics@gmail.com).

**The 2014 Imported Fire Ant and Invasive Pest Ant Conference** will be held May 5-8, 2014 at the Hyatt Palm Springs Hotel in Palm Springs, CA.

**The International Conference on 'Insects to Feed the World'** will be held May 14-17, 2014 in Wageningen, The Netherlands.

**The Hemipteran-Plant Interactions Symposium** will be held June 23-25, 2014 in Riverside, California. Contact Greg Walker at [walker@citrus.ucr.edu](mailto:walker@citrus.ucr.edu).



**The XVII Congress for the International Union for the Study of Social Insects** will be held July 13-18, 2014 in Cairns, Australia. Contact [info@iussi2014.com](mailto:info@iussi2014.com).

**The Seventh International Conference on the Biology of Butterflies** will be held August 11-14, 2014 in Turku, Finland. Contact Niklas Wahlberg at [niklas.wahlberg@utu.fi](mailto:niklas.wahlberg@utu.fi).

**The International Firefly Symposium 2014** will be held August 11-15, 2014, at the University of Florida in Gainesville. Contact Marc Branham at [marcbran@ufl.edu](mailto:marcbran@ufl.edu).

**The International Society of Hymenopterists** will be held July 20-25, 2014 in Cusco, Peru. The Second Neotropical Hymenoptera Course will be held shortly after from July 27 to August 6, 2014 at the Villa Carmen Biological Station, Manu Biosphere Reserve, Peru.

**The 2014 ESA International Branch Meeting** will be held in conjunction with the 10th European Congress of Entomology (ECE 2014) August 3-8, 2014 in York, UK.

**The 10th European Congress of Entomology (ECE 2014)** will be held August 3-8, 2014 in York, UK. Contact: [ece2014@royensoc.co.uk](mailto:ece2014@royensoc.co.uk).

**The 8th International Congress of Dipterology** will be held August 10-15, 2014 in Potsdam, Germany. Contact Sara Werner at [sara.werner@pcma.de](mailto:sara.werner@pcma.de).

**The 11th Arab Congress of Plant Protection** will be held November 9-13, 2014 in Amman, Jordan. Contact: [acpp@bau.edu.jo](mailto:acpp@bau.edu.jo).

**Entomology 2014, the 62nd Annual Meeting of the Entomological Society of America**, will be held November 16-19, 2014 in Portland, Oregon.

## 2015

**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](mailto:ipmsymposium@ad.uiuc.edu).

**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](mailto:xueamcd@gmail.com) or Dr. Tongyan Zhao at [tongyanzhao@126.com](mailto:tongyanzhao@126.com).

**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](mailto:archie.murchie@afbini.gov.uk).

**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.

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.

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Photos from Debra Wertman, PhD candidate, Natural Resources Canada

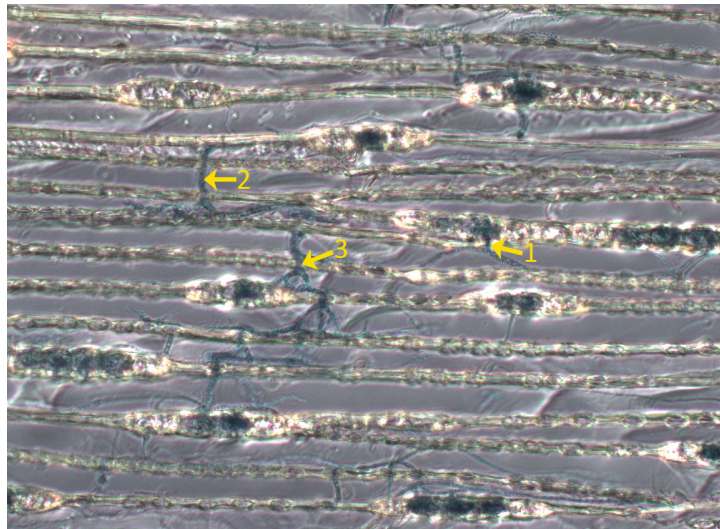


Figure 1. Hyphae of symbiotic fungi of the mountain pine beetle (*Dendroctonus ponderosae*) colonizing sapwood (tangential view). The fungi rapidly colonize the rays (1) and are able to penetrate tracheids (2) via bordered pits (3). The wood sample was taken near the top of an adult gallery on a tree that was mass attacked three weeks earlier.

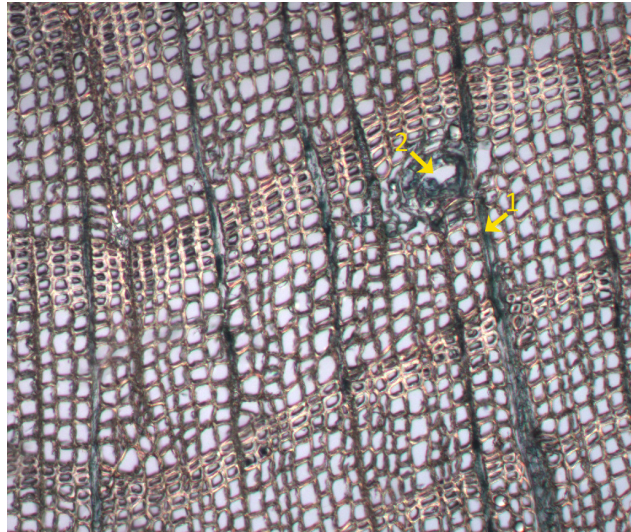


Figure 2. Hyphae of symbiotic fungi of the mountain pine beetle (*Dendroctonus ponderosae*) colonizing sapwood (cross-section). The fungi rapidly colonize the rays (1) and enter the resin ducts (2). The wood sample was taken near the top of an adult gallery on a tree that was mass attacked three weeks earlier.

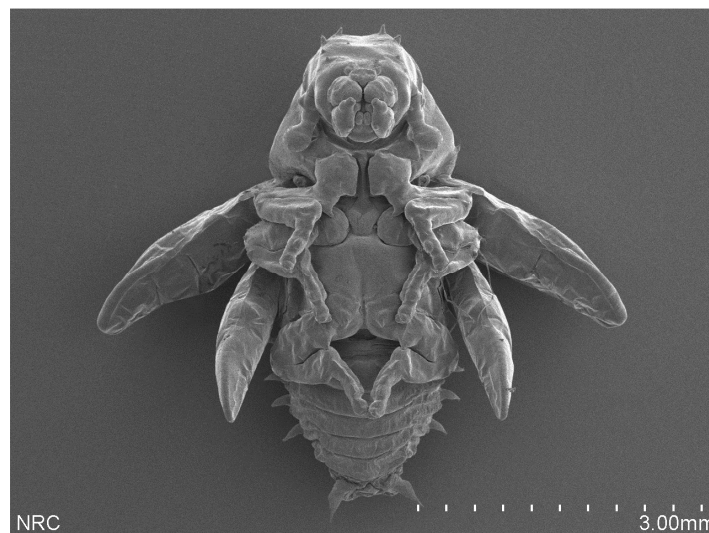


Figure 3. Mountain Pine Beetle (*Dendroctonus ponderosae*) pupa.





## **Supporting Butterfly Conservation through Collaboration: The BC Butterfly Atlas**

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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 Atlas<sup>1</sup> and butterfly atlassing projects in other jurisdictions (e.g., Butterflies of the New Millenium (UK)<sup>2</sup>, Maritimes Butterfly Atlas<sup>3</sup>, 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.

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<sup>1</sup> <http://www.birdatlas.bc.ca>

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

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





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*Lymantria mathura* (Lepidoptera: Lymantriidae) adult in forest near Yanji, Jilin, China. Photo Credit: Nancy Kummen