



December 2018 Vol. 38 (2)

Boreus



Newsletter of the Entomological Society of British Columbia





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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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Honorary Auditor	Brian Van Hezewijk Canadian Forest Service, Victoria
Regional Director of National Society	Brian Van Hezewijk Canadian Forest Service, Victoria
Web Page Editor	Brian Muselle University of British Columbia – Okanagan, Kelowna
Editors Emeritus	Peter and Elsbeth Belton



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. Kathy Bleiker, Editor-in-Chief at journal@entsocbc.ca.

The deadline for submissions to be included in the 2017 issue is 1 September, 2017. Please submit articles at the JESBC website: <http://journal.entsocbc.ca/>.

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 Dr. Gabriella (Riella) Zilahi-Balogh at boreus@entsocbc.ca.

The deadline for submissions to be included in the June issue is June 1, and the December issue is December 1. Submission dates are flexible. Submit before the end of the month.



ESBC Website

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

Update your bookmarks, and save our new URL to your browser favorites. 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, Dr. 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:

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	



ENTOMOLOGICAL SOCIETY
OF
BRITISH COLUMBIA



Annual General Meeting Minutes

11:30-1:00, November 13, 2018

Call to Order: 12:10 pm by Jenny Cory, ESBC President. 45 people present.

1. Agenda: any additions? None.
2. Approval of agenda: Robb Bennett so moved, Dan Peach 2nd, Carried.
3. Minutes from previous AGM (available in Boreus December 2017 37(2), pp 910):
Any discussion? None.
4. Approval of 2017 AGM Minutes: Bill Riel so moved, Tammy McMullan 2nd,
Carried.
5. Presentation by President of the Entomological Society of Canada, Pat
Bouchard:
 - a. ESC Education grants are increased slightly this year to \$1200 per
provincial society. President Bouchard encouraged us to create
opportunities to use these funds to enhance and encourage interest in
entomology.
 - b. 2022: ESA is planning another JAM in Vancouver, and is asking the ESC,
ESBC to consider partnering.
6. Executive Reports
 - a. Grad Student Representative, Dan Peach

Student Director - Dan Peach

April 25 – November 12, 2018

My activities since the last report have been focused on contributing to the organizational committee for the joint ESBC/ESC/ESA meeting in Vancouver, particularly regarding student-related items. These include the student auction, student mixer, student debates, and an early career professional symposium, all organized in conjunction with the ESC student director, Joanna Konopka, and the ESA student director, Casey Parker. The goal for this meeting was to provide ESBC students with as many chances to network and explore opportunities that they might not otherwise



have. Additionally, a batch of new T-shirts with an upgraded ESBC logo were ordered from Grafica. This provides updated merchandise to sell at our booth at the Vancouver meeting.

Once the JAM is out of the way, I would like to discuss the possibility of promoting/running/participating in local bioblitzs, or even trying to get some of our members up to the Yukon to participate in the annual bioblitz up there.

Respectfully submitted, Dan Peach, November 9, 2018

Regional Director of the National Society – Bill Riel

April 25 – November 12, 2018

I have mixed feelings as I prepare this report, as it will be my last as Regional Director after serving in this capacity for many years. However, I am encouraged that Brian van Hezewijk will be taking over as Regional Director and I know he'll do a fantastic job representing the ESBC to the ESC Board.

As of this JAM, Kevin Floate will take over as the President of the Entomological Society of Canada, Gail Anderson will become 1st Vice President and I will step into as 2nd Vice President.

The ESC has been making an effort to strengthen ties and communication with the Regional Societies, and to that end current ESC President, Pat Bouchard will give a brief address at the ESBC AGM. Going forward, these efforts will continue as the 1st Vice President of the ESC will be coordinating periodic conference calls between the ESC Executive Committee and the Regional Directors and Presidents.

The ESC JAM in 2019 is going to be another exciting meeting. This meeting will again be a joint meeting with another society, in this case the ESC will be jointly meeting with the Canadian Society for Ecology and Evolution (CSEE). This meeting will be hosted by the Acadian Entomological Society and will take place in Fredericton, New Brunswick from August 18-21, 2019. Note that this is a much earlier time to meet than normal. The conference website is active and can be found here:

<http://csee-esc2019.ca/index.html>

In addition, the organizers have just issued a call for symposia, details can be found at:

<http://csee-esc2019.ca/call-for-symposia-en.html>

I wish to thank the ESBC membership and the executive for allowing me to serve as Regional Director for all these years. It has been professionally enriching and satisfying to have had the opportunity to service in this capacity and I will miss my involvement with the ESBC Executive.



As I move on to new challenges with the ESC, I will, of course, remain an active member of the ESBC and look forward to seeing many of you at AGMs and ESC Joint Annual Meetings

Respectfully submitted, Bill Riel

November 5, 2018

Boreus Editor – Gabriella Zilahi-Balogh

April 2018 – November 5, 2018

This has been my 6th year as Boreus editor. It has been a rewarding experience but not without its challenges. I hope the Newsletter has been an interesting read. Please provide feedback. I would like to start announcing student member graduations. So Students/Professors, please submit to me your Thesis title, a brief abstract of your thesis, when you graduated, University, Major Professor, and what you have planned for next. This not something that I have written on before. As usual, looking for entomological forays and images that would be of interest to publish. To be honest, I rarely get a submission unless I solicit one. I encourage the executive to take lots of photos during the upcoming ESA/ESC/ESBC and forward photos to me. Provide your name as photographer and explain what you photographed. As usual there is a loose deadline of sometime in Dec. I like to publish the end of Dec.

Respectfully submitted, Gabriella Zilahi-Balogh

November 5, 2018

Webmaster – Brian Muselle

Position: Webmaster
Period under report: 01 / 01 / 2018 – 08 / 11 / 2018
<p>Summary of activities during report period: Nothing major to report. Website vitals are good. Website traffic has been steadily increasing over the years. I know there has been discussion with implementing Square into the website instead of Paypal, but I have been having difficulty with the implementation. In short, Paypal has pre-made coded buttons that can be customized for the website – straightforward, easy. Square does not have this and instead provides you with a standard ‘coding recipe’ to make your own purchase buttons for the website – this is more heavy duty web-coding than I am used to. It is doable, but I am not comfortable trying to learn how to code a purchase button from Square in order to integrate it with our website. Of course, if everyone still thinks this is the route to take, I am more than willing to learn and hopefully be able to create something for us. In the meantime, Paypal still works fine for us. Sorry if this is an inconvenience.</p>
<p>Recommendations or action items for the attention of the ESBC Board of Directors:</p> <p>(i) A merchandise page idea had been floating around, and currently we only have a T-shirt page. If and when we acquire more merchandise to sell, we can</p>



<p>incorporate the T-shirt page into the merchandise page.</p> <p>(ii) Going off of what Gabriella mentioned, it would be fun to have member and the public submit photos they have taken of insects. Once a month, we as executives choose the best one from that month and add it to a calendar (therefore 12 top photos). The winners of the photos get the calendar for free and we sell it on our merchandise page.</p>
<p>Respectfully submitted, Brian Muselle, Webmaster, November 8, 2018</p>

Journal - Kathy Bleiker

<p>Position: Editor JESBC</p>	
<p>Period under report: 25 April 2018 – 12 November 2018</p>	
<p>Summary of activities during report period: 11 manuscripts submitted in 2018: 2 rejected, 4 accepted and 6 are still in review. There were a few submissions in June, but most papers were submitted in October. This will likely cause a paper jam soon in copyediting. I anticipate the 2018 volume will have approximately 3 Articles, 2 Notes and 4 Natural History and Observations. This last section was added by Dezene Huber and it receives the most submissions. We also have Editorial and Forum Sections, which did not receive any submissions. I'm having some difficulty actually finding full descriptions for each Section online, so that is something I'd like to update online this year. Dezene has generously offered to help post the 2018 volume online and help me through the hard copy publication process this year as I have no idea how to do either. I'm making an effort to update the Section Editors (SE), who really are the engines that do most of the work. There were a number of SEs who did not realize they were SEs or who have not been active for more than 5 years. I also recruited a new SE, Joel Gibson – he is the Curator of Entomology at the BC Museum – and I think he'll be a welcome addition as his expertise will match a lot of the submissions the journal receives.</p>	
<p>Recommendations or action items for the attention of the ESC Board of Directors:</p> <ul style="list-style-type: none"> i) Any ideas on how to increase submissions, especially for Articles. ii) I'd like to make some changes to the website. I need to make a list and then see when the webmaster may be able to do them. 	
<p>Respectfully submitted, Kathy Bleiker, Editor, Journal of the Entomological Society of British Columbia, 9 November 2018</p>	



Treasurer – Ward Strong

Jan 1 - Nov 5, 2018

The ESBC is on strong financial footing, with \$11, 433 in our bank and Paypal accounts, and \$51,366 net assets. This is comparable to net assets at the end of 2016 of \$52,945. The decline in net assets of about \$1.8.k is largely due to purchases of merchandise of sale (see under Expenses). Thus in my opinion we are financially stable.

Income: Membership fees are among our highest ever, due in part to an effective membership drive, and in part to membership discounts being offered for registration of the ESA/ESC/ESBC in Vancouver. Merchandise sales are coming up due to selling a lot of T-shirts and a few art posters. GIC #3 matured and earned us \$389.57, which can be put towards scholarships, prizes etc. Miscellaneous Revenues were mostly accounted for by the two bee symposia that we sponsored with the Ministry of Environments: a Pollinator Symposium in March, and a Bumblebee Workshop in October. The other major Misc Rev item was a cheque from Dan Johnson for the Dan Johnson Prize in Insect Ecology. Of note is the AGM revenues, which are 0. This unusual figure is due to the ESA managing all registration fees and other revenues for this year's meetings.

Expenses: The large Merchandise Expenses were for the two orders of T-shirt purchases and calendars. A small invoice is outstanding for drink cozies. Merchandise purchased but not yet sold accounts for most of the decline in our net assets from 2017 to 2018. We purchased a 4-year GIC following the maturing of GIC #3. Misc expenses are mostly accounted for by expenses for the two bee symposia mentioned above. AGM expenses are nil for the 2018 meeting, the \$500 figure is awards distributed late from the 2017 meeting. Journal expenses are higher than income due to an invoice being received for typesetting for 2016 and 2017 together.

GIC's: We have 4 GIC's of \$10,000 each , coming due in 2019, 2020, 2021, and 2022:

#	Name	Matures	Invested	Max return	Min return
5	BMO Rate Riser Plus	16 Jan-19	\$10,000	\$10,241.43	
4	GMO Growth GIC	14 Dec-20	\$10,000	\$11,600	\$10,222.44
6	GMO Growth GIC	08 Feb-21	\$10,000	\$11,600	\$10,222.44
7	GMO Growth GIC	12 Oct-22	\$10,000	\$11,800	\$10,222.44

The Growth GIC's (4,6,7,) are not redeemable before maturity (they are locked in). I think it would be good to have at least one GIC redeemable in case we run into trouble. The BMO Rate Rise Plus is redeemable on the anniversary of purchase date. If we need extra cash, our need is greatest one or two months before the AGM, which is our biggest cash draw. So when GIC 5 matures, I recommend we leave the cash in our



bank account until August, then invest in a Rate Riser Plus GIC. Then we will have 3 GIC's locked away , but have one that can be redeemed in August if necessary.

Membership: We stand at 128 paid-up members plus 23 in arrears (have not paid up for 2018 yet). Paid-up members include 8 Honorary members, 32 students, 84 regular, and 4 international members. These numbers are the highest we have had in many years. This is due to two things: a series of email membership campaigns, and the membership discount for registration at the ESA/ESC/ESBC meetings. The email campaigns have helped with the Benefits of Membership document we produced in 2017. The new membership due to the registration discount illustrate the power of offering discounts; we may increase memberships further by offering membership discounts for other items such as merchandise or Journal page fees. Non-member subscribers to our communications stand at 163, which is lower than last year, mostly because about 20 have converted to members. We must continue communicating with members and non-member subscribers to maintain a strong sense of community and desire for membership.

Respectfully submitted, Ward Strong, November 5, 2018

President – Jenny Cory

October 2017 – November 2018

When I took on this role I had no idea what I had let myself into and what a busy year or so it would be. It has certainly been an interesting journey with most of the focus being on the preparation for the Joint Annual Meeting currently being held in Vancouver. Much of my role has been as part of the planning committee which has meant regular (usually monthly) conference calls and two site visits. However, I have been impressed by the cohesion of the group and the way that the three societies worked well together under the steady hand of the ESA meeting group. The ESBC has contributed in multiple ways, which I think has added to the quality and local feel of the meeting (which looks to be one of the biggest in ESA history). For example, Bill Riel worked with local artist Michael Blackstock to produce the distinctive conference logo and student rep Dan Peach worked closely with the student body to find suitable venues for events. Overall, I have been very impressed with all the hard work that various Executive committee members have put in – you have been a great team to work with. Particular thanks to Bill Riel for his role as meeting co-chair, Tracy for her role as co-leader of the Invasive Species Summit and all her activities for keeping us functioning, Ward for his continual guidance and work in putting our ESBC booth at the conference together and Dan for taking a leading role in organizing student activities at the meeting, And many thanks to all those members who stepped up to help with the ESBC booth at the meeting.

Behind the scenes, Brian Muselle has done a great job with the website and Gabriella on keeping Boreus running. I would also like to thank Dezene Huber for his excellent work on the Society Journal and wish him the best of luck in his new role as editor of the



Canadian Entomologist, and for Kathy Bleiker for stepping up to take on the role as journal editor. Finally, a big thank you to Bill Riel who is moving on to a significant role as 2nd Vice President of the Entomological Society of Canada. Brian van Hezewijk will be our new Regional Director and I am happy to welcome him back onto the Executive. All in all, it has been an exciting and interesting year as president and a very enjoyable experience.

Respectfully submitted, Jenny Cory
November 12, 2018



Gypsy Moth (*Lymantria dispar*) Photo Credit: Bugwood

7. Discussion and acceptance of reports
 - a. Need Twitter and Facebook “champions” particularly during event planning, ramp up and during.
 - b. Bob Lalonde moves acceptance of reports. Karen Needham 2nd. Carried.
8. Presentations for service by Jenny Cory; Thank you to:
 - a. Dezene Huber for years of service as Editor of the Journal (JESBC)
 - b. Bill Riel for years of service as BC Regional Director



9. Executive Elections; elected by acclimation

- a. 2nd VP: Wim Van Herk
- b. Secretary: Tracy Hueppelsheuser

10. New business

- a. Motion to amend by-laws; Bill Riel presents and moves the following:

The bylaw describing the ESBC's relationship with the ESC be amended to reflect the current relationship.

Old bylaw:

“Relationship to the Entomological Society of Canada (the Parent Society) – This Society shall in working activities remain an integral unit in the entomological organization of the Dominion of Canada, shall in aims and endeavors remain embodied with other branches of the parent Society, and shall continue in connection with and under the constitution of the Parent Society.”

Be amended to read:

“Relationship to the Entomological Society of Canada — The Society shall maintain a collaborative and cooperative relationship with the Entomological Society of Canada and shall maintain a presence on the Entomological Society of Canada’s Governing Board via the Regional Director to the Entomological Society of Canada.”

The reason for the change: The ESC is no longer the Parent Society of the regional branches. Each society is its own legal entity, registered and governed separately. The ESBC probably was a ‘branch’ of the ESC at one time, but that is no longer the case.

Motion 2nd by Lisa Poirier, Carried.

Election of honorary member, Robb Bennett, presentation and moved by Ward Strong:



Diapausing hemlock woolly adelges, *Adelges tsugae*

Photo Credits: Tom McAvoy



Nomination of **ROBERT (Robb) BENNETT**, PhD FESC
As an Honorary member of the Entomological Society of British
Columbia

Nominated August 20, 2018 by:

Ward Strong, Lisa Poirier, Bill Riel, Dan Peach and Gabriella Zilahi-Balogh

The Bylaws of the Entomological Society of British Columbia state that “Any Member who has made outstanding contributions to the advancement of Entomology in British Columbia may be nominated as an Honorary Member”. Dr. Robb Bennett has personified this requirement for most of his life.

Robb was born in France and raised in Ontario; he and his wife Jenny moved to the hinterlands of coastal BC after completing his B.Sc. There he made his mark building a floating camp which would become the luxurious Nimmo Bay Resort, a time when his dog had to swim to shore to take a poop. They lived in a house on piles in Telegraph Cove, where the dog could conveniently relieve his own piles on the boardwalk. Robb’s key publication at this time was a photograph entitled Three Derelicts and a Bicycle (Figure 1). These experiences encouraged Robb, in a characteristic leap of logic, to take up spider taxonomy, so he and Jenny moved to North Carolina for his M.Sc, then to Guelph for his PhD. They fled Ontario one last time in 1991, when Robb took a position with the BC Ministry of Forests in Victoria.

In Victoria, Robb practiced entomology and pest management in forestry seed orchards, all the while moonlighting in spider taxonomy as a backup retirement plan. Which was propitious, because ever since his early retirement, Robb has been using his world-class skills in spider taxonomy to put, if not bacon on the table, at least high-elevation spiders on the map. Robb’s entomological activities during this time include 60 papers in refereed journals and over 80 other publications. He spearheaded several key research programs that made BC an international leader in conifer seed orchard entomology. He has also taken spider taxonomy and faunistics to new levels. For example, along with his research colleagues at the Royal BC Museum, he has described many new species, some named after fast motorcycles or dead musicians, bumped the BC spider count from about 650 to nearly 900, and is leading the effort to document the full diversity of BC’s spider fauna.

Robb first joined the ESBC in 1991 and is still a member today. During this tenure he served as director, *Boreus* editor, and, for 12 years, secretary-treasurer (or, in his words, the Sexy Treasure), and was also the editor-in-chief of *The Canadian Entomologist* for five years. There were some years of meagre enthusiasm which Robb painstakingly pulled us through, almost single-handedly averting dissolution, characterized best by the December 1998 volume of *Boreus* (when Robb was its editor), whose cover bore the blunt message “The Apathy Issue”. Robb’s involvement in the Society has spanned many years, and his service has been pivotal to its progress. Similarly, his contributions to BC entomology have been exemplary. These outstanding features make Robb a long-overdue nominee for Honorary Membership.



Figure 1. Three Derelicts and a Bicycle, P Captured 2 ort McNeill, March 1979





ESA/ESC/ESBC human bug fish 2018 JAM logo. Michael Blackstock

ESA/ESC/ESBC Joint Annual Meetings

November 9-14, 2018

Over 3,800 entomologists gathered in Vancouver, British Columbia for four days of scientific presentations, exhibits, networking and learning. We had 265 scientific sessions featuring 2,430 oral and 569 poster presentations with presenters from 68 different countries. Over 12,000 tweets showed the excitement around the meeting throughout the week.



Opening Ceremony Aboriginal Dancers Welcoming Delegates to territory

Photo Credit: Tammy McMullen



Susanna Acheampong and Ward Strong manning the ESBC Booth

Photo Credit: Tracy Hueppelsheuser



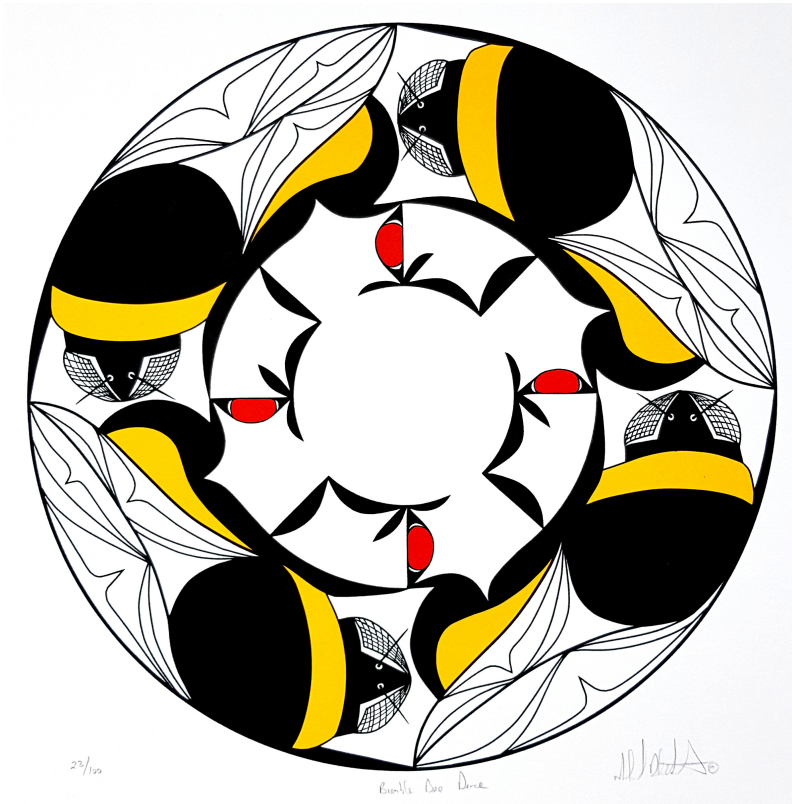
At the ESBC booth we had a number of items for sale including:

- A full range of T-Shirts
- Mug cozies
- 2019 calendars
- Reprints of aboriginal art – the bumble bee and mosquito

Please visit our ESBC merchandise page. <http://entsocbc.ca/merchandise/>
For purchase of more ESBC items.



T-shirts available: top left women's lady bug. Remaining men's robber fly.



Bumble bee dance Michael Blackstock



Tarantula on anonymous hand Photo Credit: Tammy McMullan



Gail Anderson is checking out a virtual reality headset in the exhibit hall at ESA. Photo Credit: Tammy McMullan

ESBC/ESC/ESA Student Winners





Left to right: Andreas Fischer, Emmanuel Hung, Jan Lee, Asim Renyard, Jaime Chalissery (Gries Lab). Photo Credit: SFU



Dan Peach (Gries Lab). Photo Credit: SFU



Nicolas Salcedo and Heather Coatsworth (Lowenberger Lab) Photo Credit: SFU



Students that have graduated

Tamara Babcock

MPM, graduated summer 2018

Supervisor: Dr. Gries, SFU

“Semiochemical communication between yellow jacket wasps and their yeast symbionts”

Shir Yi Yo

MPM, graduated summer 2018

Supervisor: Dr Lowenberger, SFU

“Bacteria delivered RNA interference strategies to silence genes related to vector competence of *Aedes aegypti*”

A coordinated response to eradicate Japanese beetle in Vancouver

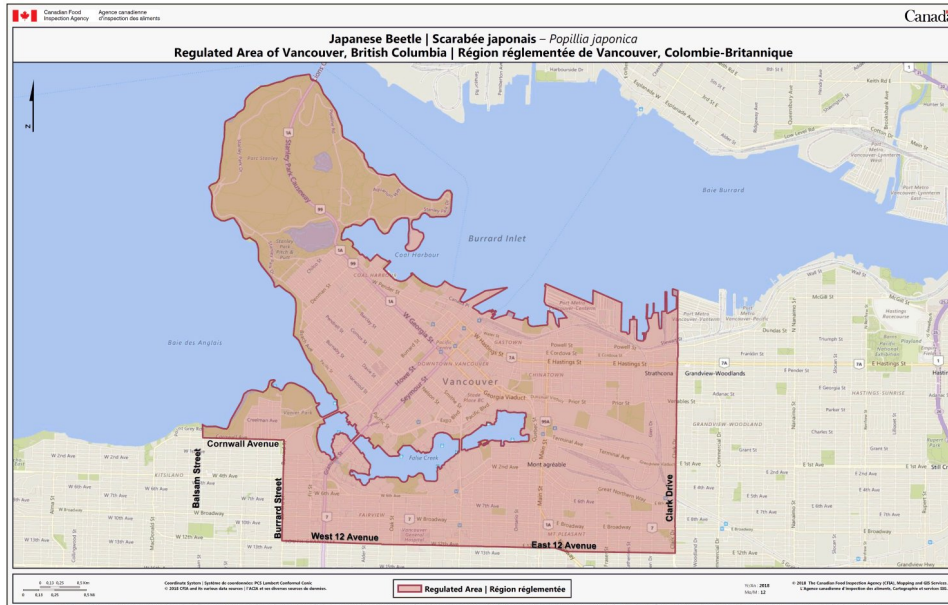
The Canadian Food Inspection Agency, British Columbia Ministry of Agriculture, City of Vancouver, and other industry and non-governmental stakeholders are working together to respond to the detection of Japanese beetle in the False Creek area of Vancouver in 2017.

This co-operative effort is required because Japanese beetle is an invasive, regulated pest that feeds on the roots of turf grass and above ground parts of more than 300 plant species including roses, fruit trees, grapevines, and other common landscape and food plants. If this pest spreads it could cause damage to lawns, landscapes, golf courses, gardens and parks, and harm BC's agricultural sector. It could also affect the beauty and health of Vancouver's ecosystem.

The Japanese beetle is native to the main islands of Japan, and was first discovered in North America in southern New Jersey in 1916. The first Japanese beetle found in Canada was in a tourist's car at Yarmouth, arriving in Nova Scotia by ferry from Maine in 1939. During the same year three additional adults were captured at Yarmouth and three at Lacolle in Southern Quebec.

For more information and image go to:

<http://inspection.gc.ca/plants/plant-pests-invasive-species/insects/japanese-beetle/eng/1328048149161/1328048244390>



A new book has been added to the ESBC library holdings:

Population Ecology of Strawberry Blossom Weevil, *Anthonomus rubi* Herbst (Coleoptera: Curculionidae) and Approaches to Limiting its Damage.

This book was given as a gift to our Society on November 13, 2018 at the JAM in Vancouver, from the author, Dr. S. Popov, Professor, Head of the Department of Plant Protection, Russian Timiryazev State Agrarian University, Moscow.

The book is written in Russian, with abstracts and figure headings in English.

Our new book is currently at the BC Ministry of Agriculture, Abbotsford, in the care of Tracy Hueppelsheuser, December 2018.

Opportunities for Graduate Students and Post Docs

Employment and Research Postings at the ESC website

<https://esc-sec.ca/opportunities/>

Employment and Research Postings at the ESA website

<https://www.entsoc.org/listjobs>



Entomological Society of Canada Student Awards

Details of Awards at <https://esc-sec.ca/student/student-awards/>

Deadline for all awards is **March 1** of each year. Look on website for eligibility for each award.

- Entomological Society of Canada Danks Scholarships
- Entomological Society of Canada Graduate Research Travel Scholarships
- Entomological Society of Canada Postgraduate Awards
- Entomological Society of Canada John H. Borden Scholarship
- Entomological Society of Canada Dr Lloyd M Dosedall Memorial Scholarship
- Biological Survey of Canada Scholarship
- Keith Kevan Scholarship
- Entomological Society of Canada Ed Becker Conference Travel Awards

Entomological Society of America Student Awards

https://www.entsoc.org/Students/student_awards

[John Henry Comstock Graduate Student Awards](#)

[The Larry Larson Graduate Student Award for Leadership in Applied Entomology](#)

[Lillian & Alex Feir Graduate Student Travel Award in Insect Physiology, Biochemistry, or Molecular Biology](#)

[Linnaean Games](#)

[Student Activity Award](#) (sponsored by Monsanto Company)

[Student Competition for the President's Prize](#)



Entomological Society of BC Awards

<http://entsocbc.ca/scholarships-awards/>

The Entomological Society of British Columbia awards annually a scholarship of \$400 to up to two postgraduate students to encourage students engaged in entomological research in BC. Funds are to be used at the student's discretion.

Dan Johnson Book Award in Insect Ecology. Dan wants to resurrect this and has sent a \$400 cheque to Ward for it. Ward moved that "we accept Dan Johnson's gift for the Dan Johnson Book Award in Insect Ecology, and that the ESBC match it annually (\$100), totalling \$200 per year for the award. The award will be given for the 'best manuscript submitted by a student in the field of insect ecology, and submissions will be due Sept 1 of each year.

Eligibility:

- Applicant must be a full-time postgraduate student at a registered institution in British Columbia at the time of application.
- Applicant must be partaking in entomological research as part of their degree program.

How to apply:

- A curriculum vitae
- A post-secondary transcript

In addition, applicant must arrange for **two letters of reference** to be submitted on behalf of the applicant.

Deadline:

Applications and letters of reference should be submitted to the ESBC Secretary at secretary@entsocbc.ca by **September 1st** of each year. Competition results will be announced at the annual general meeting which is typically held in October each year.

Judging Criteria:

Applications will be judged on the basis of contributions to the field of entomology, scientific importance of their research and the qualifications of the applicant.



Ward Strong, Robb Bennett (Honorary Member), Jenny Cory
Photo Credits: Sean McCann



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 atlasing 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 atlasing 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 atlasing 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.acodic.com/butterflyatlas.html>



Invasive Species Summit Nov 9-10, 2018 Photo Credits: Tammy McMullan

Invasive Species Summit

This 2-day summit sought to address some gaps the team felt could be better addressed by bringing together a diverse group of people with a common expertise of entomology and concern for the problem of invasives. It brought together experts from various governments, academics and non-governmental organizations to share their experience and vision. The following were brought up again and again as areas that can be improved upon.

- A need to have a greater international coordinated approach to addressing new invasives especially among expert personnel in developing networks
- Gaps in technology, tools and techniques for biosecurity and management
- Sustained funding for research and training
- Greater community knowledge and understanding of the invasive species problem and the commitment to seeking solutions. Commitment to public education and communication.



The Summit was invitation only and had ~150 attendees (1/3 were academics; 1/3 were Canadian gov reps). The Summit showcased a mix of roundtables, plenary sessions, breakout conversations, posters and panel discussions. The event panels and roundtables provided background information for the Summit and then breakout sessions were used to drill down to address specific issues or challenges that addressed:

- **Prevention:** the importance and need for more evidence based policy to reduce the rate of introductions.
- **Detection:** improve the tools we have to enhance our ability to monitor/detect in a more timely/efficient manner.
- **Response:** we need widespread collaboration among stakeholders (internationally / across borders) and enhance our ability to respond.
- **Policy:** need flexible agreements (national and international) with all stakeholders.



San Jose Scale, *Quadraspidiotus perniciosus* (Comstock)

Photo Credits: G Zilahi-Balogh



The North Okanagan Naturalists' Club

Presents

THE JAMES GRANT AWARD OF \$400

TO: _____

FOR: THE BEST GRADUATE MASTERS DEGREE PAPER

AT: The Annual General Meeting of the Entomological Society of British Columbia

James Grant was born in Trinity Valley, near Lumby, on May 25th, 1920. He went to school in the North Okanagan and became a farmer and logger before enlisting in the Canadian Army in 1941. He served in the Signal Corps in Europe until 1946.

On his return to Canada he was employed by the Federal Forest Entomology Laboratory in Vernon. His work took him throughout the Province and enabled him to increase his expertise in ornithology, Entomology and botany.

In 1970, he was appointed Field Studies Coordinator for the Vernon School District (22) and remained there until his retirement in 1978. His dedication and extensive knowledge of natural history

made him a mentor and inspiration to many naturalists and students in the Okanagan area, until his death in 1986. Grant was a founding member of the North Okanagan Naturalists' Club. He published at least thirty articles on birds and their biology and operated a hospital for injured hawks and owls from his home in Lavington.

Following his death, the "James Grant Memorial Fund" was established to contribute to the preservation of natural habitat through acquisition of property and for educational purposes, to continue the work he fostered throughout his life. This Entomological Award is presented in his memory by the North Okanagan Naturalists Club.



DATED: _____

PRESIDENT



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://esc-sec.ca/blog/>

December 2017 Bulletin available online at:
<http://esc-sec.ca/publications/bulletin/>

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/>



Kelowna Museum request

Linda Digby of the Kelowna Museum Society is requesting help acquiring insect specimens for the natural history museum. Their interest is the south Okanagan region. They are seeking donations of identified, labelled specimens and photographs from members or students. Contact Linda directly at the museum, www.kelownamuseums.ca.

Executive contact information

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CFIA trapper collecting a Gypsy Moth trap in the Kootenays. Hazards of the job. Photo Credit: Ruy Romano