

Vol 38 (1) June 2018

# Boreus



Newsletter of the Entomological Society of British Columbia





# Table of Contents

Table of Contents ..... 3

The Executive.....4

Publications of ESBC .....5

Journal of the Entomological Society of British Columbia .....5

Boreus ..... 5

ESBC Website ..... 6

Facebook ..... 6

Twitter ..... 6

Membership ..... 7

ESBC, ESC and ESA Annual General Meeting ..... 8

President’s Corner ..... 8

Graduate Student Representative Report ..... 9

Graduate Student Scholarship Competition .....10

Entomology Educational Opportunities in Canada.....11

Grad Student, Post Doc and Employment Opportunities.....11

DNA Barcoding Website ..... 13

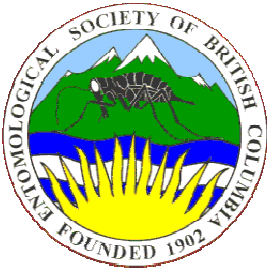
Entomological Society of Canada.....13

Brown Marmorated Stink bug in Southern BC .....14

International Entomological Societies .....16

Checklist of Lepidoptera of BC .....17

Executive Contact Information .....17



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

### The Executive

<b>President</b>	<b>Jenny Cory</b> Simon Fraser University, Burnaby
<b>1<sup>st</sup> Vice-President</b>	<b>Lisa Poirier</b> University of Northern British Columbia, Prince George
<b>2<sup>nd</sup> Vice President</b>	<b>Tammy McMullan</b> Simon Fraser University, Burnaby, BC
<b>Secretary</b>	<b>Tracy Hueppelsheuser</b> BCMAL, Abbotsford, BC
<b>Treasurer</b>	<b>Ward Strong</b> Ministry Forests, Lands and Natural Resource Operations, Vernon
<b>Editorial Committee (Journal)</b>	<b>Kathy Bleiker</b> (Editor-in-Chief), University of Northern B.C., Prince George <b>Lorraine Maclauchlan</b> , Ministry Forests, Lands and Natural Resource Operations, Kamloops <b>Bob Lalonde</b> , University of British Columbia – Okanagan, Kelowna <b>Steve Perlman</b> , University of Victoria, Victoria <b>Leland Humble</b> , Canadian Forest Service, Victoria <b>Rob McGregor</b> , Douglas College, New Westminster <b>Staffan Lingren</b> , University of Northern B.C., Prince George (emeritus) <b>Lisa Poirier</b> , University of Northern B.C., Prince George <b>Marla Schwarzfeld</b> , AAFC, Ottawa
<b>Editor (Boreus)</b>	<b>Gabriella Zilahi-Balogh</b> Canadian Food Inspection Agency, Kelowna
<b>Directors</b>	Grant McMillan Tamara Richardson
<b>Graduate Student Representative</b>	<b>Joyce Leung</b> Simon Fraser University, Burnaby
<b>Regional Director of National Society</b>	<b>Bill Riel</b> Canadian Forest Service, Victoria
<b>Web Page Editor</b>	<b>Brian Muselle</b> University of British Columbia – Okanagan, Kelowna
<b>Grad Student Director</b>	<b>Dan Peach</b> , Simon Fraser University, Burnaby



Publications of ESBC

# Journal of the Entomological Society of British Columbia

## Journal of the Entomological Society of British Columbia



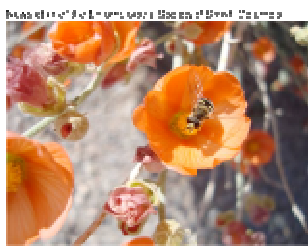
The Journal of the Entomological Society of BC is a peer reviewed, open-access journal. Manuscripts dealing with all facets of the study of arthropods will be considered for publication. Submissions may be from regions beyond British Columbia and the surrounding jurisdictions provided that content is 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](mailto:journal@entsocbc.ca).

The deadline for submissions to be included in the 2018 issue is 1 September, 2017. Please submit articles at the JESBC website: <http://journal.entsocbc.ca/>.

## Boreus

### Boreus



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

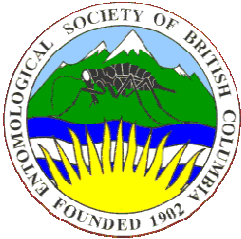
Please submit any entomological photograph, article, event or informational tidbit to the Editor!

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

The deadline for submissions to be included in the June issue is early June and the December issue is early December. If you have something to submit and missed the deadline email me I may be able to accommodate you.



## 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



Find us on  
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



@EntSocBC

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

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



## Membership

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

**Inquiries** concerning membership and back issues should be sent to the Treasurer, Ward Strong, E-mail: [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 Heron
Photographs taken in the Peace Region, BC. Photographs by Jennifer Heron	



Beyer's Scarab - *Chrysina beyeri* in Arizona, July 30, 2017.  
Photo Credits: Dave Holden, CFIA



## ESBC Annual General Meeting is held jointly with ESC and ESA, November 11-14, 2018

**The Entomological Society of BC invites you to attend the 2018 ESA, ESC, and ESBC Joint Annual Meeting!**

The 2018 Joint Annual Meeting is a unique opportunity to share your research, gain exposure, and collaborate across borders and across Societies. Connect with over 3,000 scientists and researchers from around the globe over the four science-filled days. Nov 11-14, 2018 Vancouver, BC.

Meeting website: <https://www.entsoc.org/events/annual-meeting/registration-rates>

### President's Corner

**Submitted by: Jenny Cory**

Hello fellow ESBC members!

Heading into the summer the main focus is on the upcoming Joint Annual Meeting (JAM) which will be held in Vancouver from November 11-14<sup>th</sup> 2018. The ESBC is a co-host for this meeting along with the Entomological Society of Canada (ESC) and the Entomological Society of America (ESA). There has been a lot of work going on behind the scenes since the middle of 2017 by several members of the ESBC, including numerous conference calls and several site visits. In addition to myself, many people from the ESBC have been heavily involved in the organization of this meeting, in particular, Bill Riel, Staffan Lindgren, Dezene Huber and our student rep Dan Peach. In addition, Tracey Huepplesheuser has also played a major role of the organization of an accompanying meeting on Grand Challenges in Entomology, which will focus on Invasive species, and Karen Needham who has been instrumental in organizing a tour of the Biodiversity Centre at UBC. This has been an interesting and enjoyable interaction with an excellent group of people working together under the umbrella of the



well-organized ESA. Preliminary numbers of presentations already indicate that it will be a very popular and well attended meeting. The ESBC has an important role to play as local host in welcoming the many entomologists who will be visiting Vancouver and British Columbia. I encourage entomologists of all interests and levels to attend this meeting and showcase the excellent work of local entomologists and meet with entomologists from all over North America and beyond.

## Graduate Student Representative Report

**Prepared by: Dan Peach**

It has been a busy fall and winter, with planning for our joint meeting with ESC and ESA in full swing. It's shaping up to be a great conference!

Following up with our meeting in the fall, new T-shirt printing vendors were explored but we decided to stick with our previous supplier. Maroon ESBC T-shirts were ordered to replenish our stock, and new T-shirt designs were solicited, with a design by Pauline Deschodt garnering the most votes.

I look forward to finalizing our new T-shirts, completing the organization of the 2018 JAM, and hopefully seeing many ESBC students at the meeting in November.



Desert scorpion under UV light. Arizona, Aug 2, 2017 Photo credit: Dave Holden, CFIA





## Graduate Student Scholarship Competition

### Award information:

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.

### Eligibility

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

### How to apply:

For consideration, applicants must submit a single PDF file containing:

- An outline of current research (no more than 300 words). Applicants may also choose to include other contributions to the field of entomology outside of their research.
- A curriculum vitae
- A post-secondary transcript

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

### Deadline:

Applications and letters of reference should be submitted to the ESBC Secretary at [secretary@entsocbc.ca](mailto: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.



## Grad Student, Post Doc and Employment Opportunities – Entomological Society of Canada

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

See details on the ESC website

### Permanent Opportunities

#### **Assistant/Associate Professor and NSERC Industrial Research Chair in Agricultural Entomology**

Department of Agricultural, Food, and Nutritional Science, University of Alberta

Application deadline: Open until filled; review of applications will begin 31 Aug 2018

For further information on this position, or the department, please contact the Chair by email at [afns-chair@ualberta.ca](mailto:afns-chair@ualberta.ca) or visit our website

at <https://www.ualberta.ca/agricultural-food-nutritional-science/about-us>. **Interested applicants may apply to:** <http://www.careers.ualberta.ca/Competition/A108135965>

#### **Research Scientist – Insect Ecologist (Stored Products)**

Agriculture and Agri-Food Canada – Science and Technology Branch, Winnipeg, MB

Application deadline: 19 July 2018, 23:59 PT

<https://emploisfp-psjobs.cfp-psc.gc.ca/psrs-srfp/applicant/page1800?poster=1179464>

### Grad Student Research Opportunities

See details on the ESC website

#### **MSc or PhD Student – Understanding how chemical and morphological traits vary across tree size and species, and how such variation may influence emerald ash borer oviposition behaviour, larval performance and survival, and parasitism**

University of New Hampshire

Application deadline: Open until filled with review of applications beginning mid-June; Start date: Fall 2018 (ideally)

Details: <https://mypages.unh.edu/garnaslab/new-msc-or-phd-position-available>

#### **MSc Student – Population estimate and habitat characterization of the Northern Barrens Tiger Beetle (*Cicindela patruela* Dejean) from Île-aux-Allumettes (Quebec)**

Université du Québec à Montréal and Insectarium de Montréal

Application deadline: none listed; Start date: September 2018

Details: Please see attached for details in both [English](#) and [French](#)



**MSc Student – Habitat preferences and occurrence of the common walking stick (*Diaperomera femorata*) in Québec**

Université du Québec à Montréal and Insectarium de Montréal

Application deadline: none listed; Start date: September 2018

Details: Please see attached for details in both [English](#) and [French](#).

**MSc/PhD Student – Community interactions and invasion potential of ambrosia beetles**

University of New Brunswick

Application deadline: 31 October 2018; Anticipated start date: September 2018 or January 2019

Details: [Please see attached](#)

**PhD Student – Insect genetics**

Department of Entomology, Faculty of Agriculture, Food and Environment, The Hebrew University of Jerusalem

Application deadline: None listed; Anticipated start date: August 2018

Details: <https://www.papathanos.org/join-us>

**PhD Student – Identification of mosquito and *Culicoides* midge species and their vertebrate hosts**

Lethbridge Research and Development Centre, Agriculture and Agri-Food Canada

Application deadline: 25 May 2018; Anticipated start: Sept 2018

[Details](#)

**MSc Student – Plant-insect interactions**

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

Application deadline: None listed

[Details](#)

**MSc Student – Wireworm biology and integrated pest management**

Brandon University (Brandon, Manitoba)

Application deadline: Open until filled; Start date: Summer 2018 preferred

[Details](#)

**Post-doctoral Research Opportunities**

**Post-doctoral Associate – Phylogenetic relationships and patterns of diversification among the aculeate wasps and bees**

Department of Entomology, Cornell University

Application deadline: None listed; Start date: 1 Sept 2018

Details: [https://apps.hr.cornell.edu/recruiting/facultyview.cfm?posting\\_id= Postdoctoral-Associate-Department-of-Entomology\\_WDR-00015174](https://apps.hr.cornell.edu/recruiting/facultyview.cfm?posting_id= Postdoctoral-Associate-Department-of-Entomology_WDR-00015174)



### **Post-doctoral Fellow – Genomic changes driving colour pattern diversity in butterflies**

University of Puerto Rico but physically based at Cornell University

Application deadline: Until suitable applicant found

Details: <http://evol.mcmaster.ca/~brian/evoldir/PostDocs/UPuertoRico.EvolutionaryFuncGenomics>

### **Many Post docs and Permanent Jobs posted in Entomological Society of America**

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

Check out Entomological Society of America <http://www.entsoc.org/listjobs> website and Entomological Society of Canada website <http://www.esc-sec.ca/jobs.php> for other positions and details of the positions listed above.

### **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 led 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/>

June 2018 Bulletin Vol 50(2) (current issue) available online at <http://esc-sec.ca/publications/bulletin/>



## Brown Marmorated Stink Bug in Southern Interior British Columbia

By Susanna Acheampong and Paul Abram

Brown marmorated stink bug (BMSB), *Halymorpha halys*, a native pest of Asia was first detected in Interior BC in 2016. BMSB is a serious pest of more than 100 different plant species including tree fruits, berries, grapes, vegetables, and ornamentals. Both adults and nymphs cause crop damage as a result of their feeding activities. In 2017, 165 pheromone baited traps were set up in urban sites in fruit growing regions in the Okanagan, Similkameen and Creston valleys for BMSB detection and distribution. 1015 spined soldier bug (*Podisus maculiventris*) egg masses were also exposed at detection sites in Kelowna and Penticton to survey for potential native BMSB egg parasitoids as well as the Asian wasp *Trissolcus japonicus*, an effective egg parasitoid of BMSB in China that is known to be present in adjacent areas of the United States (Oregon, Washington State).

BMSB was detected in relatively low numbers in urban landscapes in the Okanagan Valley from Salmon Arm to Osoyoos. In contrast, high numbers of BMSB adults and nymphs were captured in central Kelowna. Ornamental hosts recorded in 2017 were chokecherry (*Prunus virginiana*), tree of heaven (*Ailanthus altissima*), maple (*Acer* sp.), honey locust (*Gleditsia* sp.), catalpa (*Catalpa speciosa*), mountain ash (*Sorbus* sp.), lilac (*Syringa* sp.), magnolia (*Magnolia grandiflora*), cotoneaster (*Cotoneaster* sp.) and snowberry (*Symphoricarpos* sp.).

Native stink bug parasitoid species including *Trissolcus euschisti*, *Trissolcus utahensis*, *Telenomus podisi*, and *Ooencyrtus* sp. were reared from spined soldier bug egg masses. Red velvet mites (*Balaustium* sp.) found feeding on spined soldier bug eggs in the field attacked BMSB eggs in the laboratory, and preliminary observations from the 2018 field season suggest that these common mites can also find and attack BMSB eggs in the field. We did not rear any *T. japonicus* from eggs placed at detection sites.



Due to the urban-agricultural interface in interior B.C., the high numbers of BMSB found in central Kelowna are a major concern for the tree fruit, grape and other industries in Interior B.C. Surveys for BMSB and natural enemies are continuing in 2018.



Trece pheromone baited BMSB trap. Photo Credit: Ministry of Agriculture



Left to right: Brown marmorated adult and nymphs on cotoneaster. Photo Credit: Ministry of Agriculture



Red velvet mite and BMSB eggs, Photo credit: W. Wong, AAFC-Agassiz Research and Development Centre

## 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/>

The 2015 version of the Checklist of Lepidoptera of British Columbia is now available. The list is published by the BC Entomological Society.  
<http://bcleps.weebly.com/bc-checklist.html>

The British Columbia Lepidopterists' Guild website <http://bcleps.weebly.com/>  
 Anybody wishing to join or get involved please contact: Dave Holden [BCLeaps@shaw.ca](mailto:BCLeaps@shaw.ca)

## Executive Contact Information

<i>President</i>	Jenny Cory <a href="mailto:president@entsocbc.ca">president@entsocbc.ca</a>
<i>Secretary</i>	Tracy Hueppelsheuser <a href="mailto:secretary@entsocbc.ca">secretary@entsocbc.ca</a>
<i>Treasurer and Memberships</i>	Ward Strong <a href="mailto:treasurer@entsocbc.ca">treasurer@entsocbc.ca</a>
<i>Editor, Journal of the Entomological Society of BC</i>	Kathy Bleiker <a href="mailto:journal@entsocbc.ca">journal@entsocbc.ca</a>
<i>Boreus Newsletter Editor</i>	Gabriella Zilahi-Balogh <a href="mailto:boreus@entsocbc.ca">boreus@entsocbc.ca</a>
<i>Web Page Editor</i>	Brian Muselle <a href="mailto:webmaster@entsocbc.ca">webmaster@entsocbc.ca</a>