Boreus



Newsletter of the Entomological Society of British Columbia











June 2014 Volume 34 (1)



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Antheraea polyphemus (Cramer 1776). Photo Credits: Dave Holden



The Executive



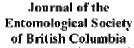
The Entomological Society of British Columbia is a scientific Society founded in 1902 for the advancement of entomological knowledge in the province.

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Publications of ESBC

Journal of the Entomological Society of British Columbia





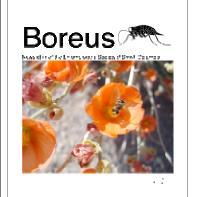
ESBC

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

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

The deadline for submissions to be included in the 2014 issue is 1 September, 2014. 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 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.



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.

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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

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		



Cottony Maple Scale, *Pulvinaria innumerabilis* (Rathvon), Photo Credits: Gayle Jesperson



ESBC Annual General Meeting and Symposium 2014 October 24 and 25, 2014

Annual General Meeting of the Entomological Society of British Columbia will be held on **October 24, 2014 at the IRMACS Theatre, Simon Fraser University**. The ESBC Symposium: "Dangerous Creatures? Arthropods Affecting Human Health, Fact and Fiction" will be held **October 25, 2014 at the IRMACS Theatre, SFU**. Mark it on your calendars.

Positions with the ESBC Executive that are up for Election at the AGM in October 2014

Up for election this year are Graduate Student Representative for a 2-year term, 1st Vice President and 2nd Vice President. Please send nominations to president@entsocbc.ca

President's Corner

Submitted by Mike Smirle

Summer is finally here but school is still in session for the dogs. They always listen and never disagree with my opinions – a dream class!

There are always lots of issues on the go in the ESBC, but to me one of the most important ones is the long-term future of our library collection. As most of you know, many federal science libraries have been closed or have had their staffing cut, including the library at the Pacific Forestry Centre (PFC) in Victoria. ESBC has had a long-standing arrangement with PFC to house our collection, but we have had to make alternative arrangements due to the retirement of the PFC librarian and closure of the facility as a working library. Vince Nealis at PFC has worked tirelessly to ensure our collection is kept in a secure environment, and presently we have permission to keep it at PFC using volunteer help to catalogue and shelve new arrivals, and to process interlibrary loans. Vince deserves credit and thanks for being proactive in keeping the collection intact – it's an irreplaceable history of the science of entomology in our province.

The other project we have undertaken is to scan all issues of the Journal and have it stored digitally. Dezene Huber (Journal Editor) and Alex Chubaty (Webmaster) have taken the lead on this and have worked hard at finding ways to get the scanning done and to find stable repositories for the files. So, we think good progress has been made in keeping our library collection in excellent shape for the future.



My best wishes to everyone for a successful field season. And – mark your calendars for this year's AGM and Symposium (announced elsewhere in this issue of Boreus) to be held October 24-25 at the IRMACS Theatre at SFU. Hope to see many of you there!

Mike



Mike Smirle teaching his dogs a thing or two.

Graduate Student Representative Report

Prepared by Ikkei Shikano

Happy summer everyone! I hope you are enjoying the warm sunny weather.

I'm sure you are all busy collecting data in the field or in the lab, but don't forget to submit an abstract to present your work at the **Annual General Meeting of the ESBC this fall** held on October 24, 2014 at the IRMACS Theatre, Simon Fraser University. See details at http://entsocbc.ca/meetings

There are separate awards for best undergraduate, Master's and PhD presentations!



Joint Annual Meeting of the Entomological Societies of Canada and Saskatchewan (ESC-ESS JAM 2014).

The national meeting this year will be held in Saskatoon from September 28th to October 1st, 2014. The abstract submission deadline for oral and poster presentations is August 1st.

Graduate students are also invited to present their research at the 2014 Graduate Student Showcase (GSS). The GSS provides a high profile opportunity for graduate students near the completion of their degrees to present a more in depth overview of their thesis research. Deadline to apply is July 1st. More information is available at http://www.entsocsask.ca/esc/submit.html

Lastly, if you need some financial assistance to travel to the meeting, don't forget to apply for the ESC Ed Becker Conference Travel Award. Applications are due on August 1st. More info here, http://www.esc-sec.ca/studentawards.php

Have a great summer!

Ikkei

ishikano@sfu.ca



Conchuela Stink Bug, Chlorochroa ligata, (Say, 1832). Photo Credits: Gayle Jesperson



Entomology Educational Opportunities in Canada

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

Research Opportunities - visit ESC website for details

2 M.Sc. positions in the Biology and Management of Carrot Rust Fly / Carrot Weevil in Carrots in Southern Ontario

University of Guelph

Start Date: September 2014

Deadline for Applications: 1 August 2014

Contacts: <u>Dr. Cynthia Scott-Dupree cscottdu@uoguelph.ca</u> or <u>Dr. Mary Ruth McDonald mrmcdona@uoguelph.ca</u>

Ph.D. position in caterpillar resistance mechanisms

McGill University, Department of Plant Science

Starting date: January 2015 (or earlier) Contact: jacqueline.bede@mcgill.ca

MSc or PhD student positions in forest plant-insect interactions

University of Calgary, Department of Biological Sciences

Starting Date: September 2014 or January 2015

Contact: mreid@ucalgary.ca

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

Concordia University, Biology Department Starting Date: September 2014 or January 2015

Contact: despland@alcor.concordia.ca

One (M.Sc. or Ph.D.) student position in forest entomology (plant-insect interactions)

University of Northern British Columbia, Ecosystem Science and Management Program

Starting Date: September 2014 or earlier

Contact: huber@unbc.ca

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

University of Western Ontario, Department of Biology Starting Date: September 2014 or January 2015

Contact: zlindo@uwo.ca



Three PhD student positions in Chemical Ecology in Forest Entomology

University of Alberta, Department of Renewable Resources

Starting Date: September 2014 or January 2015 (or applications accepted now until a suitable

candidate is found)

Contact: erbilgin@ualberta.ca

M.Sc. in pollinator ecology

Grenfell Campus and St John's Campus, Memorial University of Newfoundland Starting date: September 2014 (Graduate program), Field work (Summer 2014)

Contact: jsircom@grenfell.mun.ca

PhD Pollination biology and pollinator management in canola crop systems

University of Calgary; Department of Biological Sciences

Starting Date: May 2014 (applications accepted now until a suitable candidate is found)

Contact: cartar@ucalgary.ca / shelley.hoover@gov.ab.ca

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

DNA Barcoding Website:

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

Entomological Society of Canada

Blog Available at http://escsecblog.com/

June 2014 Bulletin (current issue) available online at http://www.esc-sec.ca/bulletin.php

Joint Annual Meeting of the Entomological Societies of Canada and Saskatchewan "Entomology in a Changing World", Saskatoon, Saskatchewan Sunday 28 September to Wednesday 1 October, 2014



Feature Article

VERNON YOUNG NATURALISTS CLUB GOES ON A BUG HUNT

In full-on stealth mode, Aiden approached the tiger swallowtail, net held at the ready. His limbs twitched cat-like in anticipation. Just before pouncing, the butterfly took off, and Aiden dashed after it in full pursuit.

Aiden was one of nearly 30 youngsters participating in a Vernon Young Naturalists outing I led to BX Creek Park, just east of Vernon. Official participants were about 6 - 10 years old, but they were joined by siblings and flanked by parents and grandparents, so the group was a large one. These young eyes were keen, and many appreciated the smallest of arthropods. Kids fanned out in the meadows, the forest, and along the creek, each armed with a Bioquip net and inexpensive hand lens. I identified click beetles and stilt-legged bugs, dug spittlebug nymphs out of their foam, pulled a hapless caddisfly larva from its snare, and played catch-and-release with green lacewings, damselflies, and orangetip pierids. A noctuid caterpillar had a tachinid egg attached, leading to a fascinated silence as the grotesque story of internal parasitoids developed. I find it immensely satisfying describing the incredible world of "urban wildlife", as I call arthropods, to the uninitiated.

Just as we finished, Aiden ran up, a breathless smile on his face. The swallowtail was trapped in the folded-over net, just as I had shown him. His determination was rewarded as everyone watched him gently pinch the thorax, remove the butterfly from the net, and open his hand. The black and yellow beauty paused a minute, testing out her wings, then lifted off and disappeared into the forest. The applause was heartfelt and deeply rewarding.



Bug Hunt with the Vernon Young Naturalist Club. Photo Credits: Ward Strong.







Bug Hunt with the Vernon Young Naturalist Club. Photo Credits: Ward Strong.



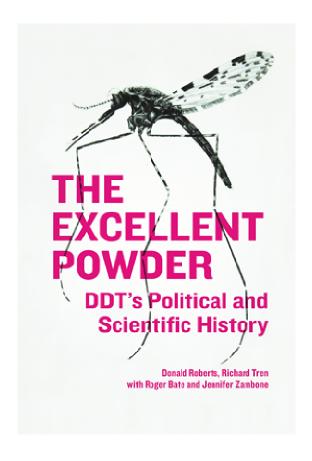
New Books

The Excellent Powder. DDT's Political and Scientific History by authors Don Roberts and Richard Tren with Roger Bate and Jennifer Zambone.

ISBN: 978-160844-376-5

\$25.00

DDT is the world's most successful public health insecticide. Millions upon millions of lives have been saved from preventable, insect-borne diseases thanks to this almost magical white powder. Yet despite decades of use and thousands of studies, DDT is also profoundly misunderstood. Few recognize the way in which DDT actually functions to protect people from diseases such as malaria. Thanks to orchestrated and well-financed campaigns against this insecticide and without scientific justification, it was banned from most countries. Thanks to these campaigns, many myths and even more fears surround DDT.





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/

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

Egyptian Entomological Society www.ees.eg.net/

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

Xerces Society for Invertebrate Conservation www.xerces.org

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

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

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

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

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

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

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

The most recent version of the <u>Checklist of Lepidoptera of British Columbia</u> is almost available. The list will be published by the BC Entomological Society. Once released updates to the list will be available at http://bcleps.weebly.com/bc-checklist.html at the British Columbia Lepidopterists' Guild website http://bcleps.weebly.com/ Anybody wishing to join or get involved please contact: Dave Holden BCLeps@shaw.ca



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

2014

The International Society of Chemical Ecology will be held July 8-12, 2014 at the University of Illinois campus in Champaign-Urbana, Illinois.

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.

The Lepidopterists' Society annual meeting will be held July 16-19, 2014 in historic Park City, Utah. Contact Todd Stout at todd@raisingbutterflies.org.

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 Fifth Quadriennial Meeting of the International Heteropterists' Society will be held July 21-25, 2014 in Washington, DC at the National Museum of Natural History. Contact Thomas J. Henry at thomas.henry@ars.usda.gov or at 202-633-4555.

The 5th International Conference on Phthiraptera (ICP5) will be held August 2-7, 2014, at Canyons Resort in Park City, UT.

10th European Congress of Entomology, ECE 2014. York, UK will be held **August 3-8, 2014.** Website: www.ece2014.com. Contact: ece2014@royensoc.co.uk

The First International Symposium on Insecticide Toxicology (ISIT 2014) will be jointly held August 5-7, 2014 in Guangzhou, China. Contact Prof Zhong Guohua at guohuazhong@scau.edu.cn or +86-20-85280308.

The 51st Annual Conference of the Animal Behavior Society will be held August 9-14, 2014 in Princeton, New Jersey. Contact Caitlin Gabor at Gabor@txstate.edu.

The 13th International Congress of Parasitology will be held August 10-15, 2014 in Mexico City. Contact: eceballos@btcamericas.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.



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.

The First International Conference on Entomophagy in North America will be held August 26-28, 2014 at the Montréal Space for Life's Insectarium.

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.

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

The 2014 IR-4 Food Use & Biopesticide Workshops will be held September 9-10, 2014 in Atlanta, Georgia. Contact Michael Braverman at braverman@aesop.rutgers.edu or 732-932-9575 ext. 4610.

The XXV Brazilian Congress of Entomology will be held September 14-18, 2014 in Goiania, Goias state, Brazil. Contact Eliane Dias Quintela at eliane.guintela@embrapa.br or +55-62-3533-2167.

The Second International Workshop on Hive and Bee Monitoring will be held in Missoula, Montana, USA, on September 17, 2014.

The 36th Annual Conference of the Western Apicultural Society will take place September 17-20, 2014 at the University of Montana, Missoula.

IOBC-WPRS WG "Integrated Plant Protection in Fruit Crops", SGs "Pome Fruit Arthropods" and "Stone fruits", October 6-9, 2014, Vienna, Austria.

The <u>International Conference on Biopesticides 7</u> (ICOB 7) will be held October 19-25, 2014, in Antalya, Turkey. Contact: <u>secretariat.icob7@gmail.com</u>

The 11th Arab Congress of Plant Protection will be held November 9-13, 2014 in Amman, Jordan. Contact: 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.

The Second International Symposium on Insects will be held December 1-3, 2014 in Melaka, Malaysia. Contact them at isoi.entoma@gmail.com or +603-89215698.

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.



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

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

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

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

2016

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

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



Close up Antheraea polyphemus (Cramer 1776). Photo Credits: Dave Holden





Supporting Butterfly Conservation through Collaboration: The BC Butterfly Atlas

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

Project Description

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

Project Objectives

The BC Butterfly Atlas has the following objectives:

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

Background

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

www.BCButterflyAtlas.ca

¹ http://www.birdatlas.bc.ca

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

http://www.accdc.com/butterflyatlas.html



Executive Contact Information

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Boreus Newsletter Editor	Gabriella Zilahi-Balogh boreus@entsocbc.ca
Web Page Editor	Alex Chubaty webmaster@entsocbc.ca



Apple Clearwing Moth, *Synanthedon myopaeformis* (Borkhausen 1789) mating on apple