

Boreus



Newsletter of the Entomological Society of British Columbia



December 2012
Volume 32 (2)



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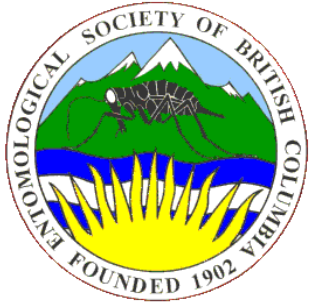
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Leah Ramsay (BC Conservation Data Centre) and Tim Innes (The Nature Conservancy) dig pitfall traps in anticipation of catching Audouin’s Night-stalking Tiger Beetle (*Omus audouini*) – no beetles were caught in these traps though. May 2012. Photo by Jenny Heron.



The Executive



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

President	Ward Strong B.C. Ministry of Forests, Lands and Resource Operations, Vernon
President-Elect	Mike Smirle Agriculture and Agri-Food Canada, Summerland
Past-President	Rob McGregor Douglas College, New Westminster
Secretary	Leo Rankin Williams Lake
Treasurer	Maxence Salomon Douglas College, New Westminster
Editorial Committee (Journal)	Dezene Huber (Editor) University of Northern B.C., Prince George Robert Cannings, Royal B.C. Museum, Victoria Lorraine Maclauchlan B.C. Ministry Forests & Range, Kamloops Bob Lalonde University of British Columbia – Okanagan, Kelowna Steve Perlman University of Victoria, Victoria Leland Humble Canadian Forest Service, Victoria Rob McGregor Douglas College, New Westminster
Editors (Boreus)	Gabriella Zilahi-Balogh Canadian Food Inspection Agency, Kelowna Jennifer Heron (co-editor until June 2013) B.C. Ministry of Environment, Vancouver
Directors	Susanna Acheampong (2 nd) B.C. Ministry of Agriculture, Kelowna Jenny Cory (1 st) Simon Fraser University, Burnaby Tracy Hueppelsheuser (2 nd) B.C. Ministry of Agriculture and Lands, Abbotsford Bob Lalonde (1 st) University of British Columbia, Okanagan Campus, Kelowna Karen Needham (1 st) University of British Columbia, Vancouver Campus
Graduate Student Representative	Ikkei Shikano Simon Fraser University, Burnaby
Honorary Auditor	Rob McGregor Douglas College, New Westminster
Regional Director of National Society	Bill Riel Canadian Forest Service, Victoria
Web Page Editor	Alex Chubaty Simon Fraser University, Burnaby



Publications of ESBC

Journal of the Entomological Society of British Columbia

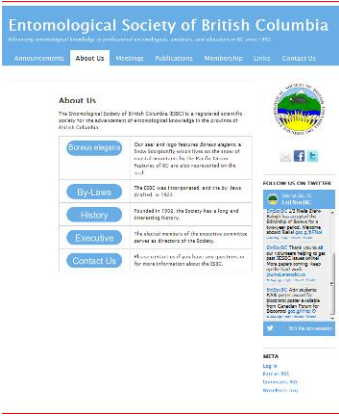
	<p>The Journal of the Entomological Society of BC is a peer reviewed, open-access journal. Manuscripts dealing with all facets of the study of arthropods will be considered for publication. Submissions may be from regions beyond British Columbia and the surrounding jurisdictions provided that content 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.</p> <p>For more information please contact Dr. Dezene Huber, Editor-in-Chief at journal@entsocbc.ca.</p> <p>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/.</p>
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Boreus

	<p><i>Boreus</i>, 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, <i>Boreus</i> 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.</p> <p>Please submit any entomological photograph, article, event or informational tidbit to the Editor!</p> <p><i>Boreus</i> has a new editor starting January 2013, please send correspondence concerning <i>Boreus</i> to Gabriella (Riella) Zilahi-Balogh at boreus@entsocbc.ca.</p> <p>The deadline for submissions to be included in the June issue is May 15, 2013.</p>
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ESBC Website



Entomological Society of British Columbia
 Advancing entomological knowledge to professionals, entomologists, students, and enthusiasts since 1922.

Announcements | **About Us** | Meetings | Publications | Membership | Links | Contact Us

About Us
 The Entomological Society of British Columbia (ESBC) is a registered scientific society for the advancement of entomological knowledge in the province of British Columbia.

Genus elegans
 Our 14th and 15th meetings (Genus elegans) will be held on 22-23 June 2013 at the University of British Columbia, Vancouver, BC. The 14th and 15th meetings (Genus elegans) are also mentioned on the site.

By-Laws
 The ESBC was incorporated with the BC Society Act in 1992.

History
 Founded in 1922, the Society has a long and interesting history.

Executive
 The elected members of the executive committee are as follows:

Contact Us
 If you cannot see your name, any questions or for more information about the ESBC:

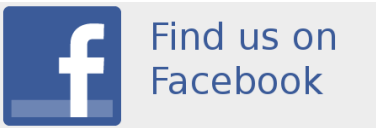
Follow us on Twitter
 @EntSocBC

Meta
 Log In | Register | Passwords | RSS | Members Only

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

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:

<p>Yellow Sand-verbena (<i>Abronia latifolia</i>), host plant to the endangered Sand-verbena Moth (<i>Copablepharon fuscum</i>); photograph Sandy Island Provincial Park, B.C. Photograph by Jenny Heron.</p>	<p>Bombyliid observed flying in early October on the North Kelowna UBC campus. There was one solitary rabbitbrush plant that was attracting an unusual number of pollinators. Photograph by Bob Lalonde.</p>	
<p>Caterpillars munching on a plant at Anabis area, New Mexico, USA, August 2012. Photograph by Jenny Heron.</p>	<p>Contents of a moth trap set at Cowichan Garry Oak Preserve, Vancouver Island, July 2011. Photograph by Jenny Heron.</p>	<p>Butterfly photo taken at Mount Douglas area, New Mexico, USA, August 2012. Photograph by Jenny Heron.</p>



Tiger beetles at the Spencer Entomological Museum, UBC. Photograph Jennifer Heron.



Boreus Editor's Note

This issue brings to a close my eighth year as an editor of Boreus. During these eight years I have not been alone in my editorial duties; both Suzie Lavalley and Jeremy deWaard served as wonderful co-editors during portions of this time. I want to thank both of them for their fun outlook and fresh eyes. I've had the opportunity to meet some very interesting people and work with many brilliant entomologists, including the many of you who served on the ESBC Executive. Thank you to everyone who submitted wonderful articles, photos and stories of their entomological adventures. I'm looking forward to working with Gabriella Zilahi-Balogh for the June 2013 issue, and Gabriella will then take full future editorial lead.

I look forward to crossing paths with everyone in the near future.
Wishing you all continued entomological well being,

Jenny





ESBC Society Business

2012 ESBC Annual General Meeting and Symposium

The 2012 Entomological Society of British Columbia Annual General Meeting (October 11, 2012) and Grape Integrated Pest Management Symposium (October 12, 2012) was held at the Pacific Agri-Food Research Station in Summerland.

Speaker List and Agenda

830-900 Registration

900-915 Welcome – Ward Strong (President ESBC)

First Session (Moderator: Michael Smirle)

915-930 Susanna Acheampong - Current insect pest issues in the Southern Interior of British Columbia

930-945 Rob McGregor & Jordan Bannerman – *Micromus variegatus*: a new biological control for aphids on greenhouse peppers

945-1000 Lauren Erland, Naomi DeLury & Soheil Mahmoud – Thrips (Thysanoptera:Thripidae): from the greenhouse to the lab, a new pest on lavender (*Lavandula pinnata*) and in coriander (*Coriandrum sativum*) tissue culture.

1000-1015 Amber Hoi, Simon Zappia & Bernie Roitberg - The confusing transition into adulthood: age-size conflict in insect metamorphosis

1015-1030 Scott Johnson, Tom Lowery, Joan Cossentine and Jenny Cory - Cool climate and climbing cutworm: Biological control of a grape pest

COFFEE BREAK 1030-1100 (Coffee and refreshments provided)

Second session (Moderator: Rob McGregor)

1100-1115 Howard Thistlewood, Susanna Acheampong, Charlotte Leaming, Molly Thurston, Brigitte Rozema, Duane Holder & Gayle Krahn - Spotted Wing Drosophila in fruit crops of interior valleys of British Columbia, 2009 – 2012

1115-1130 Christina Hodson - Effects of thermal stress on survival and development time of *Aphidius matricariae*, a biological control agent of *Myzus persicae*.

1130-1145 Jasmine Norouzi - Are fungi and parasitoids compatible for controlling aphids in greenhouses?

1145-1200 Franz Simon, Alex Chubaty & Bernie Roitberg - Turning up the heat on predation: Temperature fluctuations decrease pest suppression

1200-1215 C. Dahl, R. Tyson & R.G. Lalonde - Migration potential of *Dendroctonus* pine beetles from a forested perimeter into an urban setting

LUNCH 1215-1315 –provided

Third session (Moderator: Art Stock)

1315-1330 Chelsea Eby - Visual and olfactory cues used by the apple clearwing moth to locate showy milkweed flowers



1330-1345 Tom Lowery - Anagrus (Hymenoptera: Mymaridae) parasitoids of leafhopper eggs on grapevines

1345-1400 Bruce Archibald, David Greenwood & Rolf Matthews - Eocene fossil insect beta diversity, climate, and topography across southern British Columbia and northern Washington.

COFFEE BREAK 1400-1430 (Coffee and refreshments provided)

ESBC Business Meeting & Announcement of Student Presentation Winners 1430-1500



Can you see the pitfall traps? Sampling for Garry Oak and associated ecosystem insects at Helliwell Provincial Park bluffs, August 16, 2012. They are very well hidden in the forest! Photograph by Jennifer Heron.



Minutes: ESBC Annual General Meeting ESBC October 11, 2012

Minutes taken by Leo Rankin

Location: Summerland Agriculture Research Station, Summerland

Executive Attendance in Person: Alex Chubaty, Ward Strong, Mike Smirle, Bill Riel, Arthur Stock, Leo Rankin, Bruce Archibald, Hugh Phillips, Susanna Acheompong, Bernie Roitberg, Tom Lowery, Christina, Peggy Clarke, Don Griffiths, Karen Needham, Howard Thistlewood, Dave Gillespie, Gary Judd, Nicole Jeans-Williams, Jasmine Narouszi, Riella Zilahi-Balogh, Franz Simons, Scott Johnson, Amber Hoi, Lauren Erland.

ESBC Agenda

1. Approve Agenda
2. Executive Reports:
 1. Grad Student Rep, Chandra Moffat
 2. Regional Director of the National Society, Bill Riel
 3. Editors:
 4. Boreus, Jenny Heron & Jeremy DeWaard
 5. Website, Alex Chubaty. Call for volunteers for JESBC scan checking.
 6. Journal, Dezene Huber
 7. Secretary, Leo Rankin
 8. Treasurer, Lorraine Maclauchlan
 9. President, Ward Strong
3. Graduate Student Scholarship: recipient presentation
4. Student Paper Awards presentations
5. Results of Executive Election
6. Transfer of Presidency
7. Adjourn.

Review meeting agenda: **Motion:** To accept the agenda: Moved by Hugh Phillips, seconded Dave Gillespie, Passed.

Directors Reports (full reports are at the end of the minutes)

Secretary Report: Leo Rankin. One of the main jobs over the summer was to organize the hard copies of the JESBC stored in my possession, catalogue them and compile a list. Two copies of each journal were brought down to Alex Chubaty at SFU for scanning. The e-mail distribution list was also reviewed. A preliminary draft of secretarial duties was compiled. (see attached report in the minutes of the executive meeting for more detail)

Treasurer's Report: Lorraine MacLauchlan. There are approximately 10 current members but this number is in constant flux as some members are in arrears and many pay their dues at the AGM. Page charges received for JESBC so far total \$1,464.62. To date we have received 28 subscription renewals.



The total holdings in long term deposits are \$35,409.55. The total ESBC assets as of October 9, 2012, are \$46,256.18. (See the attached report at the end of the minutes of the executive meeting for more details).

Journal Editor Report: Dezene Huber. Alex Chubaty has done great job of getting us on-line. There are a few articles on the old system but most now are on the new process. We need to review documents in library. The new JESBC issue should be very full and interesting. We need to get the cross referencing and DOI completed. The cross referencing is not so critical because all articles are not up yet. We might have to manually enter cross referencing and DOIs. See attached report. Leo Rankin will find out the number of members who want print copies; the number of institutional subscribers; and the number of exchange partners. Karen Needham and Geoff Scudder felt the current journal quality was very poor, especially the pictures. According to Ward Strong, Dezene will now do the review of the Journal before it is printed in order to avoid this issue.

Boreus Editor: Jenny Heron. Jeremy has resigned and is now living in Ontario and both editors want to eventually withdraw. Anyone who is interested in volunteering for this position should contact Jenny. The request will also be included in the next Boreus. Jenny has made a list of responsibilities for Boreus Editor.

Website Editor Report: Alex Chubaty. Alex has got the journal site up. There is a domain name now and some digital articles are now on the journal management system. So far all old JESBC editions have been scanned. Now we have to review old journals and the metadata. We need volunteers to complete this task. We also need DOI, CrossRef and Paypal.

Graduate Student Representation: Chandra Moffatt. Last year Chandra attempted to initiate a Student Engagement Committee, but most universities in the province do not have strong entomology graduate programs so the attempt was not overly successful. Chandra has compiled a list of Graduate Student representative duties. Thanks for all you good work Chandra.

Regional Director ESC: Bill Riel. The 2012 JAM will be hosted by the Entomological Society of Alberta and will be held November 3-7, 2012 in Edmonton. The 2016 International Congress of Entomology will be hosted by Orlando, ending the confusion around whether ESBC would consider hosting it in Vancouver.

President's Report: Ward Strong. Ward summarized the actions since the last meeting. Dezene and Alex have led the move to place the Journal completely online using the Open Journal Systems. Alex Chubaty has arranged the digitization of back copies of the Journal. The ESBC now has its own domain name, complete with email addresses specific to each executive position. The ESBC Library, housed at the Pacific Forestry Centre, was at risk of elimination but thanks to the efforts of Vince Nealis has sorted it out with PFC. We are in the process of creating an "Executive Manual", which details responsibilities, duties and timelines for executive positions.

Motion: To accept the 2012 Fall Executive Reports: Moved by Riiala Zilahi-Balogh, seconded Howard Thistlewood; Passed.



2. Graduate Student Travel Scholarships

The successful candidates were: Alex Chubaty and Ikkei Shikano.

3. Student Oral Presentation Awards

Since there were no Ph.D. presenters during the AGM presentations, awards were only given to the best MSc and BSc talks. The award was \$400 each. All the papers were very good which made the judge's task difficult. The North Okanagan Naturalists' Club James Grant Award for the best MSc talk went to Scott Johnson. The BSc oral presentation award was presented to Amber Hoi.

4. Journal Fees

Motion: To change journal ESBC fees to a \$350.00 flat fee per article with an additional surcharge for colour prints. Fees would be waived for invited papers. Moved by Ward Strong, seconded, Alex Chubaty; Passed.

5. Elections of New Members:

President: There were no nominations for the president elect. Therefore it was decided to maintain the current president and associated positions for a second year (which is within the society by-laws). Additional nominations were requested from the floor. No new nominations were brought forward so Ward Strong was confirmed as president for a second term. Therefore Rob McGregor will remain as past president and Mike Smirle will also continue as president in waiting.

Treasurer: Lorraine Maclauchlan has resigned. Maxence Salomon has accepted the nomination. No new nominations were tendered from the floor so Max Salomon was elected by acclamation.

Directors: Max Salomon, Dezene Huber and Arthur Stock are leaving as directors. Four new directors are required. Tracy Huepplesheuser (returning for a second term), Karen Needham, Bob Lalonde and Jenny Corry have put their names forward. No additional nominations were forthcoming from the floor so the four new directors were confirmed by acclamation.

Grad Student Director: Chandra Moffatt has finished her term. Ikkei Shikano has agreed to be the student rep. Again there were no nominations from floor so Ikkei Shikano was confirmed as the new Graduate student director.

Motion: A motion was brought to adjourn the ESBC Fall AGM; moved by Peggy Clarke, seconded by Franz Simon. Passed.

President's Report

Prepared by Ward Strong for the ESBC Executive Meeting, October 9, 2012

2012 has been an adventurous year for the ESBC, with some major changes accomplished and more in the works.

- Under the capable direction of Dezene Huber and Alex Chubaty, the Journal has gone completely online now, using the Open Journal Systems software to integrate an electronic submission, review and publication process. Hardcopies are still available for our Exchange Partners and interested members, for an additional fee. We now have a digital ISSN, each paper is assigned a DOI, and all Journals are listed in Open Access abstracting services. This will help improve the exposure of the JESBC.
- Alex Chubaty has spearheaded the project to digitize back copies of the Journal. All volumes back to Volume 1, 1903, have now been digitized by SFU Library; we are in the process of checking the Optical



Character Recognition conversion of the paper titles and abstracts. All completed papers will be installed on our Open Journal Systems website for access by anyone at any time. Volunteers are still needed to complete this project.

- Payment for Journal page charges can now be made by Paypal. This system will be extended to payment for subscriptions, membership, and the AGM and Symposium as well. Part of this will be a system to register online for the AGM and Symposium.
- The ESBC now has its own domain name, complete with email addresses specific to each executive position (not the person holding that position).
- The Website has a completely new look and feel, and is now easily customizable by future Web Editors: thanks again to the amazing efforts of Alex Chubaty. We are also integrated with social media via an ESBC blog and Facebook page.
- The ESBC Library, housed at the Pacific Forestry Centre, was at risk of being terminated with the rest of the holdings at that institution. Thanks to the prompt and well-targeted efforts of Vince Nealis, we now have an agreement in place that the ESBC holdings will remain in place at the PFC for the foreseeable future.
- We are in the process of creating an "Executive Manual", which details responsibilities, duties and timelines for executive positions. With our high turnover of executive positions, critical items tend to slip through the cracks. Hopefully the "Manual" will help prevent this.
- Our Treasurer Lorraine Maclauchlan has stepped down; we have successfully found a replacement to fill her big shoes. The Editors of Boreus (Jenny Heron and Jeremy DeWaard) have announced their plans to step down as well, so we are seeking a volunteer to take over that role.

Several Executive Committee decisions have also been made by email vote; these are included in the attached document.

Respectfully submitted,

Ward Strong
President



Regional Director's Report

Prepared by Bill Riel for the ESBC Executive Meeting, October 9, 2012

The 2012 Joint Annual Meeting will be hosted by the Entomological Society of Alberta and will be held November 3-7, 2012 at the Coast Edmonton Plaza Hotel in Edmonton, Alberta.

In 2013, the Entomological Society of Ontario will host the Joint Annual Meeting. While this wouldn't normally be Ontario's turn in the rotation, 2013 marks the 150th anniversary of both the ESC and the Entomological Society of Ontario. It was decided that it would be fitting to celebrate this special anniversary by hosting the meeting in the founding province.

This past year, the Entomological Society of BC were approached by the Entomological Society of Canada (who in turn had been approached by the Vancouver Convention Center) to see if we had any appetite to host the 2016 International Congress of Entomology. There was some confusion arising around this topic as the Entomological Society of America had a strong bid in to host this meeting in Orlando.

After further communication it became clear that we were not being asked to prepare a competing bid, but rather if we would consider doing so in case the American bid were withdrawn. At present, the American bid has been accepted and we anticipate that this should end any consideration of hosting this meeting in Vancouver in 2016.



Aedes togoi pupa coming up for air. Melanie Hart and Peter Belton (Simon Fraser University) are researching their adaptations. Photograph by Melanie Hart October 3, 2012.

Web Editor's Report

Prepared by Alex Chubaty for the ESBC Executive Meeting, October 9, 2012

Our new journal site (<http://journal.entsocbc.ca>) was setup at the same time that we acquired our own domain name (<http://entsocbc.ca>) for the society's website.

This new journal site is set up using Open Journal Systems (<http://pkp.sfu.ca/ojs>), which is a free, open-source journal management system. This new system allows to completely manage the JESBC online: submission of papers, peer-review, and editorial workflows are part of features that the new site offers. We have already begun to accept submissions for publication in December's volume 109 of the journal! Our new online journal management system will provide free, openaccess to all JESBC published papers, and will expedite the review and publication process, allowing online pre-prints ahead of publication.

In addition to the new online journal management system, with the help of the SFU library, the ESBC has been scanning and digitizing its entire journal archive plus supplementary reports, occasional papers, and quarterly bulletins dating back to 1906. We completed scanning and optical character recognition (OCR) of the JESBC's back issues, scanning nearly 7000 pages from our extensive journal archive. OCR converts the scanned images of each paper into text, which can then be used for indexing, searching, and digital delivery of the scanned content.

With the help of several volunteers, we have begun importing back issues of the journal into the new online system and are making them available (free, openaccess) on the journal site. *We still have a ways to go, so the more volunteers we get the faster these valuable papers can be made available online!*

We are currently working to setup Digital Object Identifier (DOI) cross-referencing for all our journal content, as well as getting indexed in major scientific databases, including Google Scholar, Directory of Open Access Journals, and Web of Science.

Additionally, we are looking forward to implementing online payment of membership dues and journal page charges using PayPal.

Alex Chubaty



Taylor's Checkerspot (*Euphydryas editha taylori*) sunning itself on warm downed wood in the new Denman Island Provincial Park. June 2012. Photography by Jennifer Heron.



Journal Editor's Report

Prepared by Dezene Huber for the ESBC Executive Meeting, October 9, 2012

- Thanks to the hard work of our web editor, Alex Chubaty, we have started to take submissions to the journal via an online management system. Our new journal address is: <http://journal.entsocbc.ca>
- Alex has also been instrumental in getting our entire journal archive OCR scanned. We now have all issues in digital form and are working on inputting metadata to aid in search (etc.) capability.
- We are now listed at the Directory of Open Access Journals: <http://www.doaj.org/>
- JESBC is now fully open access. We are currently still printing some paper copies, but we have revised both our membership fee structure and our page charges to reflect our open access shift.
- We are currently working (thanks Tracy and Susanna) to get an impact factor listed for JESBC.
- We are currently working to get listed by CrossRef.
- We now have both a print and an online ISSN.
- We currently have nine articles in late-stage processing for the journal this year. Four of them have been accepted and of those three are currently in typesetting. Thanks to Ian Wilson (Kelowna), we also have two forum articles in processing pertaining to the recent discussion about cosmetic pesticide bans here in BC. We hope that the forum section will become a regular feature. Depending upon acceptance rates and authors' turnaround times, we could have up to eleven total contributions in this year's journal.

Dezene Huber



Greater Night-stalking Tiger Beetle (*Omus dejeauni*) observed storming along a Denman Island roadside, June 2010.
Photograph by Jennifer Heron.



Treasurer's Report

Prepared by Laurene Maclauchlan for the ESBC Executive Meeting, October 9, 2012

Sent by email

Approximately 110 members but this number is in constant flux as some members are in arrears and many pay their due at the AGM. A letter and cheque was received from the North Okanagan Naturalists' Club (Kay M. Bartholomew) for \$400 to cover the 2011 James Grant Award to Tanya Stemberger.

Page charges received for JESBC so far total \$1,464.62 (not including currency exchange).

To date we have received 28 subscription renewals (\$687.90 not including exchange) and about 52 member renewals. Some mugs, posters and other ESC things were sold at the 2011 AGM and accounted for minor income. About \$1,050 was brought in at the 2011 AGM and Symposium (AGM fees, dues, symposium fees) and we paid \$1,500 for catering.

We have a \$20,000 term deposit at The Islands Savings Credit Union (current value \$20,033.52) for a 5 year term. A term deposit that came due totaling \$2,989.52 at the Island Savings Credit Union was transferred to the primary ESBC account. We currently have a \$15,000 term deposit at the Interior Savings Credit Union earning 2.5% (matures 2014; current value \$15,376.03). The total holdings in long term deposits are \$35,409.55.

The balance in the Interior Savings chequing account at the fall meeting in 9 October 2011 was \$9,612.94. The current balance 9 October 2012 is \$10,846.63. Total income during the time period from October 9, 2011 to October 9, 2012 was \$8,251.84 and the total expenditures were \$7,032.52.

The total ESBC assets as of October 9, 2012, are \$46,256.18

Lorraine Maclauchlan
Treasurer ESBC
October 9, 2012



ESBC Finance report for October 9, 2012					
		Credit	Debit	Amounts before conversion	
October 9, 2011					
	Interior Savings chequing account (Balance Oct. 9, 2011)	\$9,612.94			
	Interior Savings Term Deposit	\$15,000.00			
	Island Savings Credit Union (Term deposits)	\$22,325.54			
1	Deposits / AGM (L. Maclauchlan)	\$ 1,488.72			
2	AGM intake (From Leo Rankin: for AGM, Symposium, ESBC dues)			\$ 1,050.00	some USD
3	Additional membership cheques			\$ 160.00	some USD
4	Subscriptions			\$ 539.90	some USD
5	Page Charges			\$ 1,344.62	
6	Deposit from AGM & other dues, NONC, term deposit	\$ 6,112.74			
7	Island Savings (term deposit came due) (\$2,989.52)				
8	North OK Naturalist Club (James Grant Award 2011) (\$400)				
9	Chandra Moffat - student travel scholarship (cheque #77)		\$ 500.00		
10	Ikken Shikaun - student talk award (cheque #78)		\$ 400.00		
11	Erfan Vafaie - student talk award (cheque #79)		\$ 400.00		
12	Tanya Stenberger - James Grant Award (cheque #80)		\$ 400.00		
13	Sodexo Canada Ltd. (catering) (cheque #81)		\$ 1,500.00		
14	BC Revenue Services (Society Status) (cheque #82)		\$ 25.00		
15	Service charges & interest payments	\$ 2.43	\$ 56.00		
		\$54,542.37	\$3,281.00		
October 9, 2012					
	Interior Savings chequing account (Balance Oct. 9, 2012)	\$ 10,846.63			
	Interior Savings Term Deposit	\$ 15,376.03			
	Island Savings Credit Union (Term deposits)	\$ 20,033.52			
1	Wayside Press - JESBC printing		\$ 1,112.72		
2	Page Charges	\$ 120.00			
3	Web building costs (W. Strong/A. Chubbatt)		\$ 837.04		
4	Typesetting (T. Stemberger)		\$ 750.00		
5	Postage cost (JESBC Vol. 108 mailout))		\$ 1,019.83		
6	Members dues & subscriptions	\$ 525.92			after exchange
7	Service charges & interest payments	\$ 2.03	\$ 32.00		
	Income/debits (October 9, 2011 to October 9, 2012)	\$ 8,251.84	\$ 7,032.59		
	Oct. 9/11 balance + credits - debits (missing some some US conversion)			\$10,832.19	



Summary					
	Interior Savings chequing account (Balance Oct. 9, 2012)	\$ 10,846.63			
	Interior Savings Term Deposit		\$15,376.03		
	Island Savings Credit Union (Term deposits)		\$20,033.52		
	Total ESBC funds	\$ 46,256.18			

Statement prepared October 9, 2012
 Lorraine Maclauchlan, ESBC Treasurer
 Audited – Rob McGregor, Past President



Spruce budworm inoculation: Spruce trees of varying resistance to *Pissodes strobi* (white pine weevil) are inoculated with *Choristoneura occidentalis* (Western spruce budworm) to determine if there is cross-resistance between different feeding guilds. Photo by Ward Strong.



Interior Savings Credit Union Bank Summaries

Date	Interest	Service Charge	Balance	Deposit	Withdrawals	Comments
Sep 30/11	\$ 0.38	\$ 8.00	\$ 9,299.99			
Oct 31/11	\$ 0.41	\$ 8.00	\$ 9,581.12	\$ 1,488.72	\$ 1,200.00	\$925.50 cash from AGM
Nov 30/11	\$ 0.38	\$8.00	\$ 7,573.45		\$ 2,000.00	
Dec 31/11	\$ 0.32	\$8.00	\$ 7,566.77			
Jan 31/12	\$ 0.32	\$8.00	\$ 7,533.09		\$ 25.00	
Feb 29/12	\$ 0.30	\$ 8.00	\$ 7,565.39	\$ 40.00		
Mar 31/12	\$ 0.32	\$ 8.00	\$ 7,557.71			
April 30/12	\$ 0.41	\$ 8.00	\$ 13,662.86			
19-Apr				\$ 783.76		USD cheques/dues/fees
19-Apr				\$ 4,898.47		Cash/Can cheques AGM/dues
23-Apr				\$ 430.51		page charges
May 31/12	\$ 0.58	\$ 8.00	\$ 12,662.72	\$ 120.00	\$ 1,112.72	Wayside press/page charges
June 30/12	\$ 0.50	\$ 8.00	\$ 11,860.12		\$ 795.10	W. Strong & A. Chubbatt (web)
July 31/12	\$ 0.49	\$ 8.00	\$ 11,060.67			
04-Jul					\$ 41.94	#84 - W. Strong
16-Jul					\$ 750.00	#85 - typesetting (T. Stemberger)
August 31/12	\$ 0.46	\$ 8.00	\$ 10,033.30		\$ 1,019.83	postage cost (JESBC)
Sep. 2012 (no statement yet)		\$ 8.00	\$ 10,846.63			
09-Oct				\$ 210.00		Can members - cheques
				\$ 113.00		Subscriptions - Can funds
				\$ 70.00		Can members - cash
				\$ 132.92		\$140 USD exchange (members/subs)
	\$ 4.87	\$ 104.00		\$ 8,287.38	\$ 6,944.59	



Student Representative Report

Prepared by Chandra Moffat for the ESBC Executive Meeting, October 9, 2012

This report brings to an end my two years of service as Graduate Student Director for the ESBC. It is with some sadness that I retire my post, as I have thoroughly enjoyed my time on the Executive of the ESBC. However, I am sure the new Graduate Student Director will take up the position with enthusiasm and do an excellent job!

I was interested in this position because I believed students could play an active role in shaping new directions for the ESBC, and that students benefit tremendously from participating in professional societies. The last two years have made me believe this even more strongly. The 2010 JAM between the ESBC and ESC was a tremendous success. This meeting had more 110 students in attendance, nearly 40% of the total attendees! The launch of the new ESBC website, the ESBC Facebook group and Twitter feed have been excellent in increasing the communication among ESBC members in the last two years, particularly among students! I am pleased to have been a part of these projects, although of course the large share of the credit goes to our Webmaster, another enthusiastic ESBC student, Alex Chubaty.

Last year I attempted to initiate a Student Engagement Committee, but as most universities in the province do not have strong entomology graduate programs (although they have strong entomological researchers!) it was not overly successful. I still think an endeavor of this nature is worth pursuing, and I encourage the subsequent Graduate Student Directors to try to connect with as many entomology students across the province as possible. Posts on the website, Facebook page, Twitter feed, and in *Boreus* are all effective at reaching current student members. One way to reach future ESBC student members may be to maintain contact with faculty who has entomology related research programs at our province's universities, and I am sure these faculty members will continue to pass along relevant information to their students.

I have compiled a list of the duties I have performed in this position and this will be a live document to be passed down to future Graduate Student Directors. This document includes some contact information for professors with entomology related programs at the various BC universities and some other suggestions for future Graduate Student Directors. Thanks very much for a wonderful two years!



Boreus Report

Prepared by Jenny Heron for the ESBC Executive Meeting, October 9, 2012

Sent by email

Thank you to all of those who have submitted photographs and articles to Boreus. I've put together a timeline and list of responsibilities for the executive to assist with future contributions and a timely Boreus. This is to help with making our job more efficient, spreading out some of the responsibilities, and promoting the AGM/Symposium. After being the editor and co-editor of Boreus since 2004, I (Jenny) have decided to seek a replacement and Gabriella Zilahi-Balogh has agreed to take the lead as Boreus editor starting with the June 1013 edition.



Clack-clack: This large katydid from St Lucia (Caribbean) is locally called a Clack-clack because of the loud, scratchy call it makes through the nights. Photograph by Ward Strong August 2012.



Grape Integrated Pest Management Symposium October 12, 2012.

08:00-08:30 Registration

08:30-08:40 Introduction to Symposium – Kenna MacKenzie

08:40-09:10 Overview of the Okanagan Wine Grape Industry – Pat Bowen

09:10-09:40 Insect Pests including Spotted Wing Drosophila – Susanna Acheampong

09:40-10:00 Vegetation as a GIS Component – Olga Shaposhnikova

10:00-10:30 Break

10:30-10:50 Vegetation and Insect Management – Tom Lowery

10:50-11:05 Grapevine Leaf Roll Virus – Jose Urbez-Torres

11:05-11:20 Grape Insect Toxicology – Mike Smirle

11:20-11:35 Cutworm Species Complex and Natural Control Agents – Naomi DeLury

11:35-11:50 Nematode effects on wine grapes – Tom Forge

11:50-12:00 Conclusion – Kenna MacKenzie

12:00-1:00 Lunch (provided)

1:00 Depart for Field Tour

1:30 Stop 1: See Ya Later Ranch Winery, Vincor, Mike Watson, IPM, computerized data collection and GPS

3:00 Stop 2: Park Hill Vineyard, Hans Bouchler, IPM and Organic Grape Production

4:30 Depart for PARC Summerland

5:00 Adjourn



Participants on the fieldtrip to vineyards during the ESBC Grape Integrated Pest Management Symposium, October 12, 2012.



Tracy Heuppelsheuser, Kenna MacKenzie, Ward Strong at the Grape Integrated Pest Management Symposium in Summerland, October 12, 2012.



Hans Boucler (organic grape grower), Karen Needham and Tom Lowry at the Grape Integrated Pest Management Symposium in Summerland, October 12, 2012.

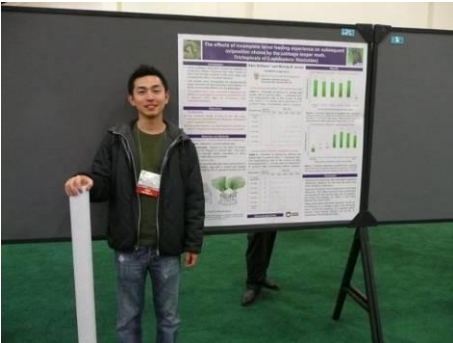


Field tour at the Grape Integrated Pest Management Symposium in Summerland, October 12, 2012.



New ESBC Executive

Ikkei Shikano, Graduate Student Representative



Hi Everyone! I am very excited to serve as the Graduate Student Representative for the ESBC. I would like to thank Chandra Moffat for her hard work and service as the Graduate Student Representative on the ESBC for the last two years. I will do my best to keep the Student Affairs section active in Boreus, and run the ESBC Student Engagement Committee that Chandra started. A little about me, I am a PhD Candidate at Simon Fraser University, Department of Biological Sciences in Burnaby. My thesis investigates tritrophic interactions between cabbage loopers, their host plants, and entomopathogens. I

also just joined the Student Affairs Committee for the Entomological Society of Canada. I was born in Japan but raised in BC, and did my BSc and MSc at UBC.

Tracy Hueppelsheuser, Director



Tracy Hueppelsheuser is a provincial entomologist for the British Columbia Ministry of Agriculture, based in Abbotsford. Her work centers on biology and pest management of established and invasive insect species that impact BC agriculture. This includes insect identification, outreach and extension activities, policy and regulation development, and some surveillance. The Ministry works closely with other organizations with similar mandates and goals, including Canadian Food Inspection Agency, Pest Management Regulatory Agency, other provincial Ministries, and industry and grower organizations.

Maxence Solomon

I am a Biology Instructor at Douglas College, in New Westminister, and enjoy teaching a lot. Research-wise, I am broadly interested in the behavioural ecology of spiders and insects in relation to their feeding and social habits. I am an alumnus of the inspiring Roitberg lab at SFU, studied in Europe before coming to Canada and did some postdoctoral research in neotropical ecosystems. I am delighted to be the new treasurer of the society and will strive to serve you well.



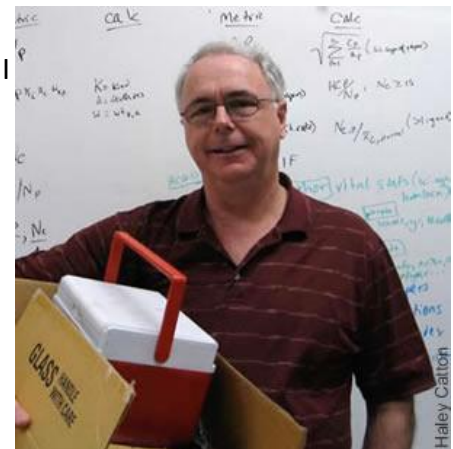
Karen Needham

Karen is the Curator of the Spencer Entomological Collection at the Beaty Biodiversity Museum, University of British Columbia. She has worked as a lecturer (Department of Zoology) and curator since 1991. Her specialty is the taxonomy, systematics, and biodiversity of aquatic insects, in particular Hemiptera, Ephemeroptera, Trichoptera, and Plecoptera. Karen also has an interest in forensic entomology. Karen has been on the ESBC Executive and served as the President of the Entomological Society of British Columbia. She is also a member of the Sessional Faculty Committee of the UBC Faculty Association and served as a member-at-large of the Faculty Association Executive, as a member of their Personnel Services Committee, and as their representative to the Canadian Association of University Teacher's Contract Academic Staff committee in Ottawa. She has been an environmental consultant to the Ministry of Environment, the Corporation of Delta, GVRD Parks, the David Suzuki Foundation, and the Department of National Defense, among others.



Bob Lalonde

I am an associate professor at the North Kelowna Campus of UBC, where I teach a number of ecologically-based courses: including Entomology. For research, I explore population-level phenomena and evolutionary questions and mix empirical approaches with theoretical modeling. I or my students have research projects using a number of model systems, including weed biological control, gall-forming insects and parasitoids.



Jenny Cory

I am interested in insect –natural enemy interactions, particularly those involving pathogens. Her research spans both applied and fundamental aspects of the insect-pathogen relationship, including tritrophic interactions, mixed infections, pathogen persistence and the role of diversity in pathogen virulence and host resistance. Current projects include long term studies on the western tent caterpillar and its nucleopolyhedrovirus, the nutritional basis of cabbage looper resistance to a range of pathogens, parasitoid- fungal interactions in aphids and microbial control of climbing cutworms in vineyards.

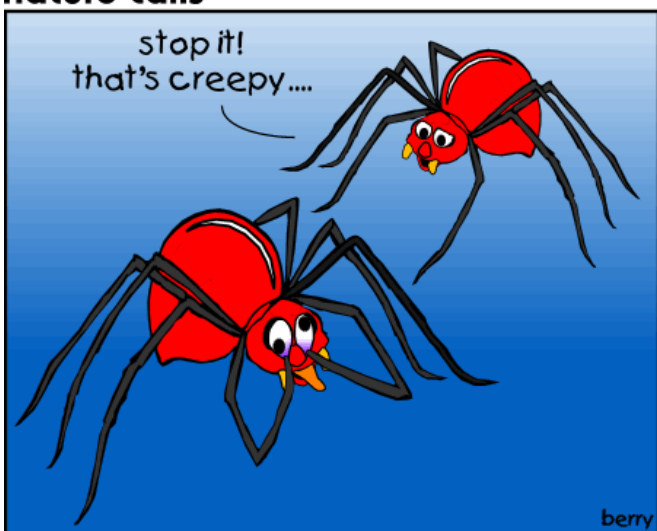




Entomological Humour

Berry Wijdeven is a Species At Risk Biologist for the B.C. Ministry of Environment in Haida Gwaii. Berry's work has been published in *Macleans*, the *National Post*, *Vancouver Sun* and numerous other weekly publications. Among his artistic talents, he creates the weekly comic *Nature Calls*. Register for Berry's weekly email by sending him an email at Berry.Wijdeven@gov.bc.ca

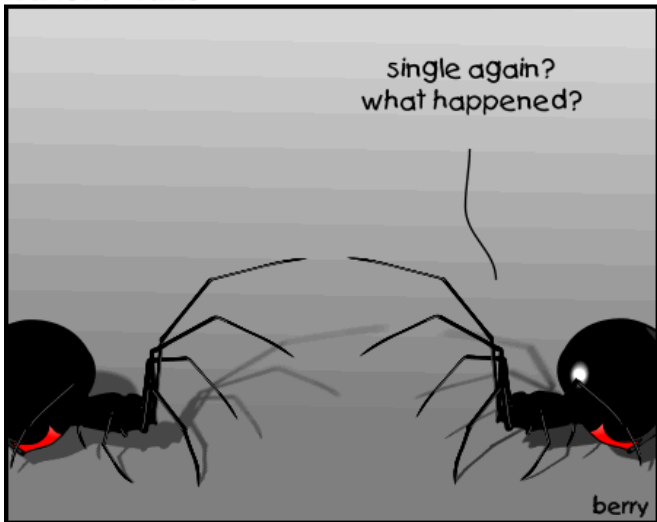
nature calls



nature calls



nature calls



nature calls

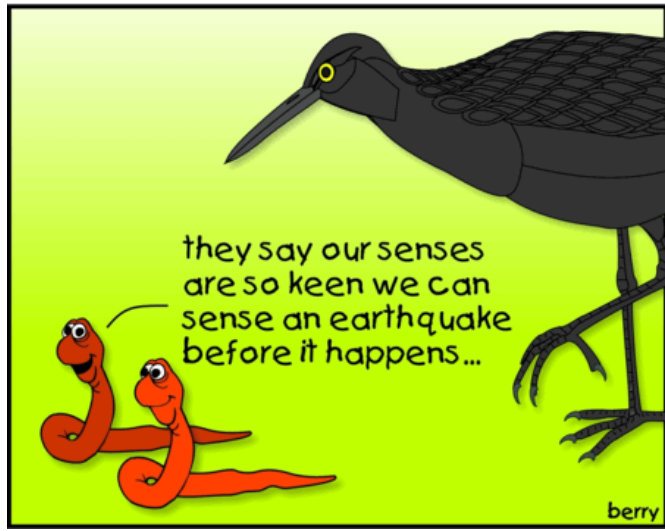




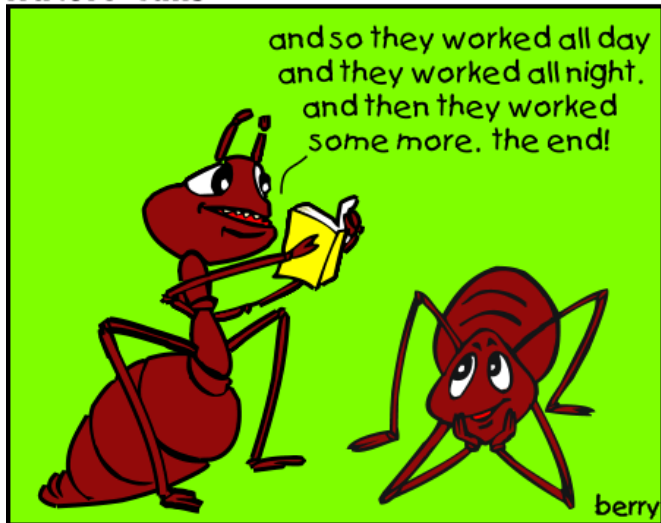
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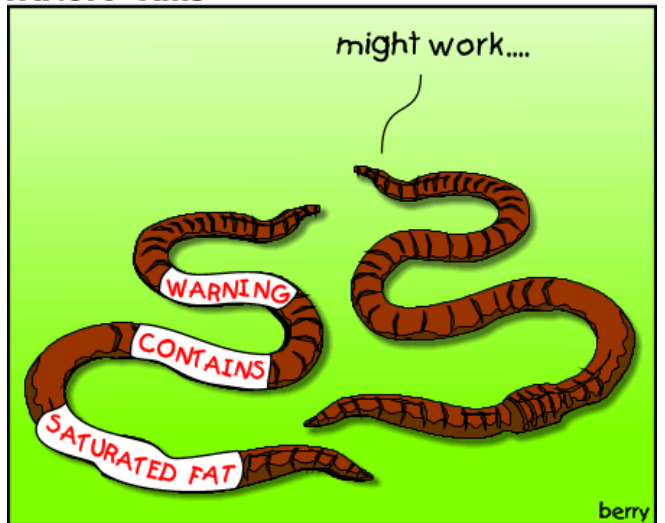
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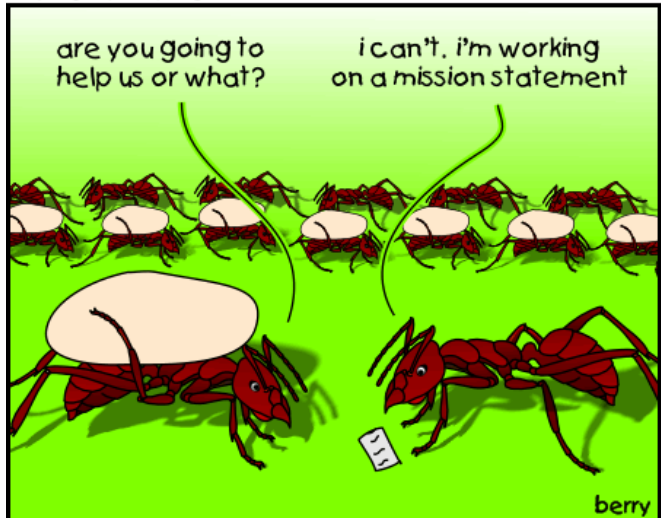
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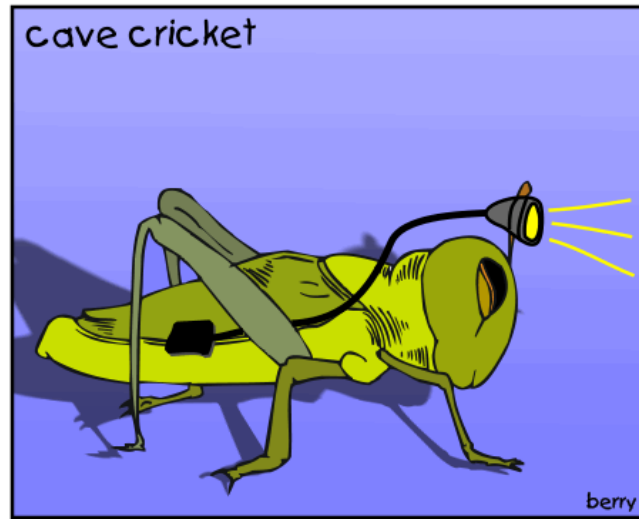




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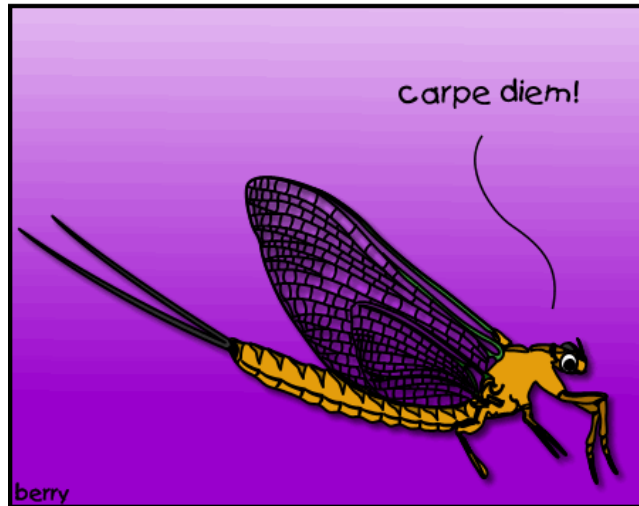
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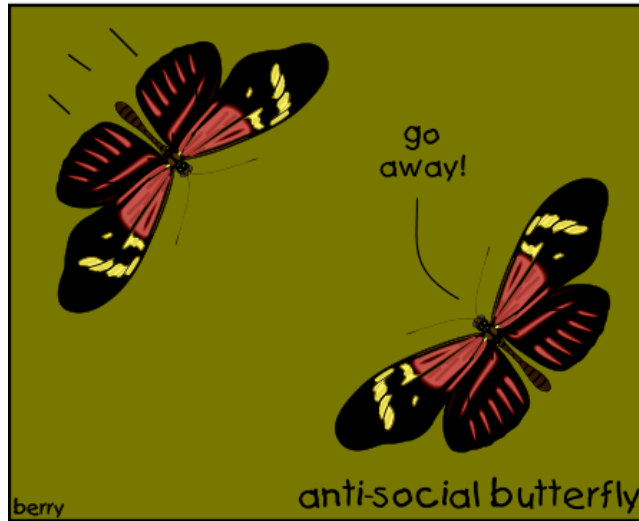
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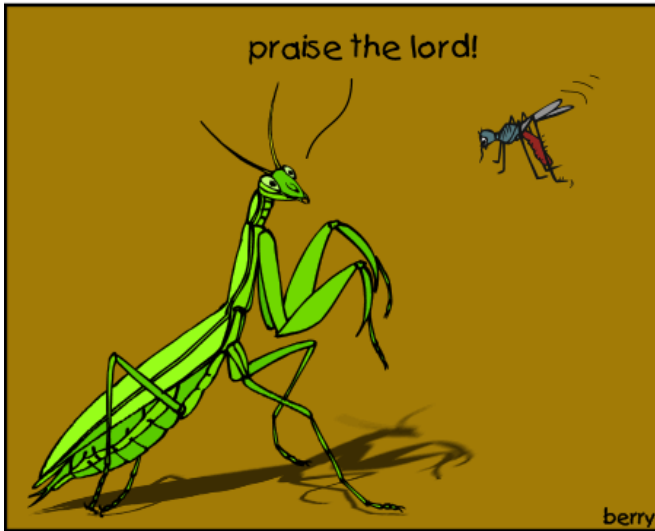


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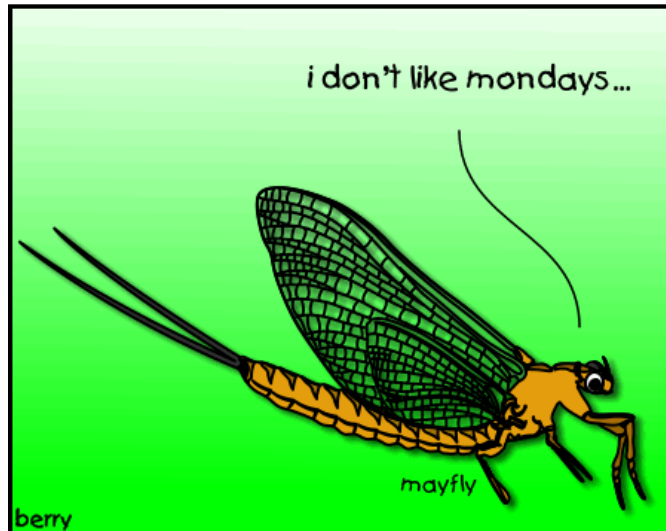




nature calls



nature calls



Robbin Thorp, University of California-Davis, demonstrates bee catching techniques during The Bee Course September 2012 at the Southwestern Research Station near Portal, Arizona. Photo by Jenny Heron.



Random Entomological News

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/>

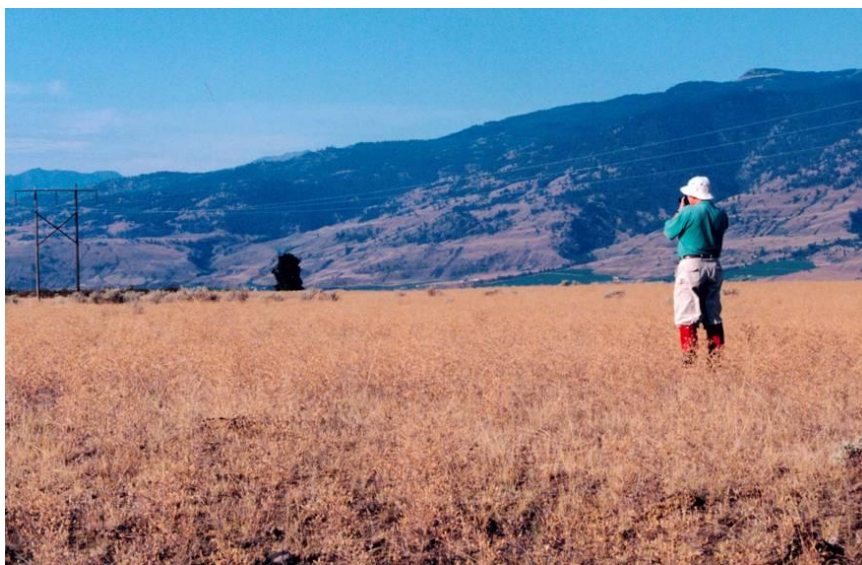
Entomological Society of Canada

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

December 2012 Bulletin available online at http://www.esc-sec.ca/bulletin/bulletin_dec_2012.pdf

Eight Annual Photo Contest Winning Photos posted at <http://www.esc-sec.ca/photocontest12.php>

Joint Annual Meeting of the Entomological Societies of Ontario and Canada (Predating the Nation - A Sesquicentennial Celebration of Entomology in Canada) Guelph, Ontario, 20-23 October 2013



Geoff Scudder surveying for insects in a heavily grazed property, south Okanagan, June 1999. Photo by Jenny Heron.



Books

Investigating Insects: Rare Entomology Books – list of books

http://www.abebooks.com/books/RareBooks/insects-bugs-textbooks-bee-keeping/rare-entomology.shtml?cm_ven=blog&cm_cat=blog&cm_pla=link&cm_ite=title%20of%20blog%20post

Physicians Guide to Arthropods of Medical Importance, Sixth Edition

<http://www.taylorandfrancis.com/books/details/9781439850855/>

Public Health Entomology

<http://www.taylorandfrancis.com/books/details/9781439848814/>

Other books such as Honey Bee Colony Health, Agricultural Acarology, Veterinary Entomology, Forensic Entomology, Molecular Biology and Genetics of the Lepidoptera and others

<http://www.taylorandfrancis.com/books/subjects/SCBS14/>

Random Fun Websites

Funny Biologist notes and Comics <http://birdandmoon.com>



Rob Curtis, Spencer Entomological Collection at the Beaty Biodiversity Museum (UBC) collects beetles from skunk cabbage at Sasquatch Lake Provincial Park near Harrison Lake, April 2012. Photo by Jennifer Heron.



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/>



Random grasshopper photographed in Willcox, Arizona, August 2012. Photograph by Jennifer Heron.



Upcoming Meetings and Conferences

A miscellany of random entomological information caught on the internet.

Cascadia Prairie-Oak Partnership joins with the Northwest Scientific Association for a joint conference, which will be held at **University Place Hotel, Portland, Oregon, March 20-23, 2013**. There are two themes for this joint meeting:

- CPOP Theme: "Managing Fragmented Oak-Prairie Habitats: Birds, Bugs, and Changing Communities"
- NWSA Theme: "The Urban Environment"

CPOP is organizing an exciting program that will address many relevant topics in the prairie-oak system.

CPOP specifically encourages presentation and poster submissions relating to prairie-oak habitat restoration, species reintroductions, new information on prairie-oak flora and fauna, conservation infrastructure, landscape planning, and climate change. CPOP is pleased to provide two special symposia and three prairie-oak focused field trips. A brief description of each is below.

Registration is OPEN. Find all the meeting information and register on-line at <http://www.northwestscience.org/>. The early (and cheaper!) registration period ends February 28th. Abstract submission deadline February 15th.



Jerry Rosen, American Museum of Natural History, demonstrates bee catching techniques during The Bee Course September 2012 at the Southwestern Research Station near Portal, Arizona. Photo by Jenny Heron.



Professional Development Opportunities

Neotropical Lepidoptera Field Course August 7 – 16, 2013 “Jenaro Herrera” Research Centre, Loreto, Peru. Application deadline April 1, 2013. For more information see <http://www.cebioperu.org/courses/lepidoptera-2013.php>

The Ant Course August 4 – 15, 2013, Manu Biosphere Reserve, Peru. See course website <http://research.calacademy.org/ent/courses/ant>

The Bee Course August 25 – September 4, 2013 at the Southwestern Research Station, Portal, Arizona. See course website <http://research.amnh.org/iz/beecourse/>

Lepidoptera Course August 8 – 17, 2013 at the Southwestern Research Station, Portal, Arizona. See course website <http://research.amnh.org/swrs/education/lepidoptera-course>

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



View each morning from the Southwestern Research Station in the Chiricahua Mountains near Portal, southwestern Arizona. Base for The Bee Course and other taxonomy courses. See <http://research.amnh.org/swrs/education> for a list of courses.



Entomological Meetings and Conferences

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

2013

The Michigan Mosquito Control Association Annual Meeting will be held February 6-7, 2013 at the DoubleTree by Hilton in Bay City, Michigan. Contact Planning Chair Rebecca Brandt at 989-894-4555.

The Eleventh Annual Meeting of the North American Black Fly Association will be held February 9-10, 2013 at the Georgia Center for Continuing Education on the University of Georgia campus in Athens, Georgia. Contact Elmer Gray at ewgray@uga.edu.

The 4th International Congress on Insect Science will be held February 14-17, 2013 in Bangalore, India.

The Entomological Society of America Southwestern Branch Meeting will be held February 25-28, Las Cruces, New Mexico.

The Entomological Society of America Southeastern Branch Meeting will be held March 3-6, 2013 at the Baton Rouge Hilton in Baton Rouge, Louisiana.

The ESA International Branch Meeting will be held March 5, 2013 in Pucón, Chile in conjunction with the Fourth International Symposium on Biological Control of Arthropods.

The Fourth International Symposium on Biological Control of Arthropods will take place in Pucón, Chile, March 4-8, 2013. Contact Tania Zaviezo at tzaviezo@uc.cl.

The Southeast Regional Mosquito Control Workshop will be held March 5-6, 2013 in Panama City, Florida. Contact John Smith at docmx8@gmail.com.

The Entomological Society of America Eastern Branch Meeting will be held March 16-19, 2013 in Lancaster, PA.

The Third Conference on Invasion Biology, Ecology and Management will be held April 2-4, 2013 at the University of Kentucky in Lexington. Contact Esther Edwards at eedwards@uky.edu or (859) 257-3780.

The International Symposium on Ectoparasites of Pets (ISEP) will take place in Munich, Germany on April 7-9, 2013. Contact info@isep2013.net.

The Entomological Society of America Pacific Branch Meeting will be held April 7-10, 2013 at Harrah's Lake Tahoe in Stateline, Nevada.

A Dried Insect Digitization Workshop will be held April 24-25, 2013 at the Field Museum of Natural History in Chicago, Illinois. Contact Margaret Thayer at mthayer@fieldmuseum.org.

The Entomological Society of America North Central Branch Meeting will be held June 16-19, 2013 in Rapid City, South Dakota.



[The 14th Meeting of the IOBC/WPRS Working Group on Insect Pathogens and Insect Parasitic Nematodes](#) will be held June 16-20, 2013 in Zagreb, Croatia. Contact Renata Bažok at rbazok@agr.hr.

[The 62nd Annual Meeting of the Lepidopterists' Society](#) will be held June 27-30, 2013 at the Hilton University of Florida Conference Center. Contact Jacqueline Y. Miller at jmiller@flmnh.ufl.edu.

[Biodiversity and Integrated Pest Management: Working Together for a Sustainable Future](#) will be held July 4–5, 2013 in Manado, North Sulawesi, Indonesia. Contact: biodivipm2013@gmail.com.

[The 11th North American Forensic Entomology Association Annual Meeting](#) will be held July 14-17, 2013 at the University of Dayton in Dayton, Ohio.

[The 2013 Insect Hormones \(19th Ecdysone\) International Workshop](#) will be held July 21-26, 2013 in Minneapolis, Minnesota. Contact Michael B. O'Connor at moconnor@umn.edu.

[The 6th International Symposium on the Ecology and Biology of Galling Arthropods and Associated Endophytes](#) will be held August 4-8, 2013 in Queensland, Australia. Contact Robin Adair at robin.adair@australisbiological.com.au.

[The Rocky Mountain Conference of Entomologists](#) will be held August 4-8, 2013 at Cathedral Ridge in Woodland Park, Colorado. Contact Ken Cradock at Kenwyn.Cradock@enmu.edu.

[The International Chemical Ecology Conference](#) will be held August 19-23, 2013 in the Melbourne Convention and Exhibition Centre in Victoria, Australia. This is a joint meeting of the Asia-Pacific Association of Chemical Ecologists (APACE) and the International Society of Chemical Ecology (ISCE).

[The Ento '13 International Symposium and Annual National Science Meeting](#) will be held September 4-6, 2013 at the University of St. Andrews in Scotland. Contact Archie K. Murchie at archie.murchie@afbini.gov.uk.

[The 12th International Symposium "Ecology of Aphidophaga"](#) will be held September 9-13, 2013 in Belgrade, Serbia. Contact aphidophaga12@gmail.com.

[The XXXXIII International Apimondia Congress](#) will be held in Kyiv, Ukraine from September 29 till October 4, 2013. Contact: info@apimondia2013.org.ua.

[The Second Global Conference on Entomology](#) will be held November 8-12, 2013 in Kuching, Sarawak, Malaysia. Contact Dr V. Sivaram at info@gce2013.com.

[Entomology 2013, the 61st Annual Meeting of the Entomological Society of America](#), will be held November 10-13, 2013 in Austin, Texas.

[A Joint Annual Meeting of the Entomological Society of Ontario and the Entomological Society of Canada](#) will be held October 20-23, 2013 in Guelph, Ontario. Contact Joel Gibson at jfgibson@uoguelph.ca.

2014

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

2016

[The XXV International Congress of Entomology](#) will be held September 25–30, 2016 in Orlando, Florida, USA. The 2016 ESA Annual Meeting will be held simultaneously in Orlando.



British Columbia Butterfly Atlas



Supporting Butterfly Conservation through Collaboration: The BC Butterfly Atlas

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

Project Description

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

Project Objectives

The BC Butterfly Atlas has the following objectives:

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

Background

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

¹ <http://www.birdatlas.bc.ca>

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

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



Submitted Articles

12-12-12: The last of the triple digit days

Written by Karen Needham, Spencer Entomological Collection, Beaty Biodiversity Museum, UBC

Fade in: January 1st, 2001, as two entomologists share a New Year's beverage and plan for the field season to come. One of them suddenly realizes what a great day it would be to go collecting because the data labels would read 01-01-01! Too bad about all the snow out there...but maybe next year?

Thus began more than a decade of excited entomologists everywhere gathering their gear and heading out on the triple digit days to preserve cool critters and even cooler collecting dates forever. In museum drawers far and near, even some of them right here, lie specimens bearing a coveted 03-03-03 from Jericho Park, or a super lucky 07-07-07 from Beaver Lake in Stanley Park (where coincidentally the number of entomologists and arachnologists participating was, you guessed it, seven!).

Even if it was only Rex Kenner (Vertebrate Curator at the Beaty Biodiversity Museum) and I, we never missed a triple digit day through to 09-09-09. And the collecting on these special days has continued since, in order to preserve his memory, honor his life, and uphold an important tradition.

So it was with a mixture of glee and sadness that Chris Stinson, the vertebrate curator here at the Beaty Biodiversity Museum, and I headed out on 12-12-12 for a final triple digit foray - an afternoon of brisk aquatic collecting in the ponds at the UBC Botanical Gardens. Amongst the usual suspects (*Notonecta kirbyi*, *N. undulata*, *Callicorixa vulnerata*, *Gyrinus picipes*, assorted mayflies and caddisflies) was a corixid that I did not recognize – every entomologist's dream! A fitting end to the glorious field days that began with a crazy notion and a few refreshing beverages one New Year's day.



Chris Stinson plucks aquatic insects from his collection net, December 13, 2013 at Jericho Beach Municipal Park. Photo by Karen Needham.



Karen Needham surveys aquatic insects December 13, 2013 at Jericho Beach Municipal Park. Photo by Chris Stinson.



A Trip to Brooks Peninsula, Vancouver Island

Brooks Peninsula juts into the Pacific Ocean from the west coast of northern Vancouver Island and was a refugia during the last glaciation event. In late August 2012 a group of six keen biologists/ entomologists decided to venture to the peninsula for a bug and slug collection camping adventure. Our priority was to survey for Haida Gwaii Slug (*Staalaa gwaii*), a rare endemic found in glacial refugia on Haida Gwaii and up for assessment by the Committee on the Status of Endangered Wildlife in Canada. In addition to searching for the slug, we also collected any other invertebrate!



Darren Copley, Claudia Copley and Lennart Sopuck organize our campsite on the top of Brooks Peninsula.

Random conversation snippets: *Wahoo, what an awesome campsite choice! Isn't today lovely! We are so smart for planning our adventure in late August – the weather is perfect! Who wants beef stroganoff-in-a-bag-add-water? I can see Russia!*



Kristiina Ovaska selects her tent site.

Random conversation snippets: *What a brilliant place to put my tent! I will sleep in this little divot in the ground! We are secure inside the bear fence! What an amazing view! I caught a beeeeee! I made a flagging trail to the toilet! I put out the bat detector! I put up the moth trap!*



Claudia Copley selects a malaise trap site.

Random conversation snippets: *Wow, this place is beautiful! That malaise trap is perfectly established! Look at the fluffy clouds and blue sky! Look, there's a Fluffy-belly-yellow-claw-bark-bird! I put in pitfall traps! There are no biting bugs here!*



Erica McClaren samples plants on the ridgeline of Brooks Peninsula.

Random conversation snippets: *Why are there are there no trees growing on the landscape? I'm walking on the moooon! The ground is so spongy! I just saw a vole! What's happening to the blue sky? I can no longer see Russia? The wind is picking up! We will all have a grand sleep tonight!*



Darren, Erica and Claudia make breakfast.



Darren barely walking his way back to our campsite.

Random conversation snippets: *How was everyone's sleep? I heard scratching in the middle of the night? I woke up with the tent roof pressed on my face! I had strange dreams about whistling? The bear fence was sparking in the rain! The wind sounded like chanting banshees! That divot turned into a small stream running under my tent!*

Random conversation snippets: *We found Haida Gwaii Slug! What do you mean it's only noon! Let's go back to the campsite for lunch! I can't stand up in the wind! I now know why there are no trees on the ridgeline! How do those fishing boats never move out there!*



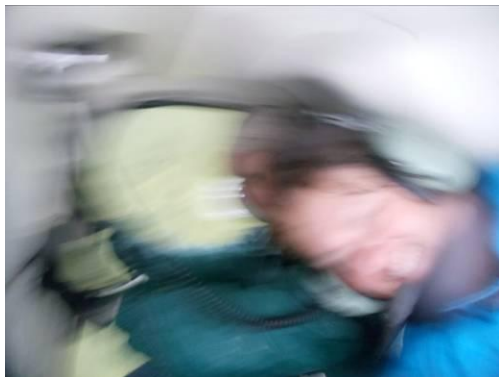
All weather tents put to the test.



Erica, Darren and Claudia plotting strategy.

Random conversation snippets: *Off in the distance, the lonely flapping net informs us our campsite location is nearby. Did we forget to turn on the bear fence? Where's the tent? Is that your rain jacket in the trees? Did anyone else have to crawl back to camp? Where's the bat detector? The pitfall traps are flooded!*

Random conversation snippets: *Where's your tent. My tent is under that flattened tarp! Should we bail? There's gotta be some kinda insect lurking under a rock? I still can't find the bat detector? Where are the cookies? Let's call the helicopter and get outta here!*



Claudia Copley and Jenny Heron in the backseat of the helicopter.



Lennart Sopuck and Erica McClaren on the beach after drop-off.

Random conversation snippets: *Helicopter ride back to the beach! Eeeee!*
Photos by Jenny Heron.

Random conversation snippets: *When shall we go again?*



Entomological Announcements

Retirements

Rob Cannings

Curator of Entomology, Royal British Columbia Museum, 1980-2012



Rob Cannings has retired as Curator of Entomology at the Royal British Columbia Museum. Rob joined the RBCM on 2 January 1980 and retired exactly 33 years later. From 1987 to 1996 he also managed the Natural History Section at the Museum. He has been named a Curator Emeritus and will continue his research projects there.

Rob grew up in the grasslands of the Okanagan Valley and his early fascination with these habitats and their associated ponds and lakes led to his later interest in robber flies (Asilidae) and dragonflies (Odonata), which were diverse there. His undergraduate and MSc studies examined chironomid midge assemblages in grassland saline lakes. Although for years he has focused on the systematics and faunistics of dragonflies and robber flies, he publishes widely on many insect groups, from mantidflies and moths to lampyrid beetles and bumble bees. In retirement, Rob says he'll concentrate more on the Asilidae than he has in the past. His main focus in robber fly

research has been the systematics of *Lasiopogon*, diverse in North Temperate regions, which was the subject of his doctorate, although he has a fondness for *Efferia*, too. Studying the diversity of the asilid fauna of Canada, especially, will be a priority.

Rob has a strong interest in popularizing insects and insect identification through handbooks, keys and the internet. He is the author or co-author of several books, including *The Dragonflies of British Columbia* (1977), *Birds of the Okanagan Valley, British Columbia* (1987), *The World of Fresh Water* (1998), *Introducing the Dragonflies of British Columbia and the Yukon* (2002), and *The Systematics of Lasiopogon (Diptera: Asilidae)* (2002).

Rob has served on the Scientific Committee of the Biological Survey of Canada (Terrestrial Arthropods), the Invertebrate Subcommittee of COSEWIC (Committee on the Status of Endangered Wildlife in Canada) and the British Columbia Invertebrate Recovery Team.

Active in the Entomological Society of BC, Rob was President (1986, 2001) and Regional Director to the Entomological Society of Canada (1983-86). He started the ESBC newsletter *Boreus* in 1981 and was editor until 1991; he is an associate editor of the ESBC Journal. He has served as the chair of the Entomological Society of Canada's Endangered Species Committee.





In former lives, Rob worked as a biologist and nature interpreter for British Columbia Parks and the Canadian Wildlife Service and was a lecturer and museum curator at the University of British Columbia. He earned a BSc and MSc from the University of BC; his PhD comes from the University of Guelph.

In 2008 Rob and his two brothers, Richard and Syd, were made Fellows of Okanagan College for “bringing British Columbians and Canadians a richer appreciation of the natural world through their writings, professional activities and dedication”. Rob was presented the 2009 Bruce Naylor Award, a national honour that recognizes “exceptional contributions to the study of museum-based natural history in Canada”.

After taking a break for a couple of months, Rob says he’ll pick up his projects where he left off, working at home and visiting the RBCM collection a day or so a week. He still can be reached at his RBCM email address -- rcannings@royalbcmuseum.bc.ca. Although at the moment there is a hiring freeze in the BC government that will likely last until the provincial election in May, Rob is confident that a new curator will be hired before long. In the meantime, for inquiries or other communication with RBCM Entomology, contact the Collections Manager, Claudia Copley at ccopley@royalbcmuseum.bc.ca (250-952-0696).





Obituaries

Glenn Edward Haas

25-January-1929 • 19-September-2012

Biography of Glenn written by Robert Lewis (for his upcoming book on North American fleas) and modified slightly by Jim Kucera to appear in *Flea News* (Dec 2012) and *Boreus* (Dec 2012).

Glenn was born in Chicago, Cook County, IL. He received the B.S. from Purdue University, West Lafayette, IN, in 1951, the M.S. from the University of Wisconsin at Madison in 1952 and the Ph.D. in 1957. Both of the latter degrees were in Entomology and his doctoral dissertation was entitled "*Ectoparasites of the Mearns cottontail in Wisconsin.*"

From 1957 to 1959 Haas served as Entomologist to the 9th Naval District, Great Lakes, IL. In 1960 and 1961 he served briefly with Dr. Irving Fox at the University of Puerto Rico before being appointed Animal Ecologist - Medical Entomologist with the Plague Research Unit in the State of HI. In 1966 and 1967 he was Visiting Assistant Professor in the Department of Zoology in the laboratory of Dr. C.E. Hopla at the University of Oklahoma at Norman, and later appointed to the position of Health Scientist Supervisor and Environmental Scientist with the New Mexico Health and

Social Services Department at Los Alamos, NM. From 1971 to 1973 he was Visiting Scientist and Research Associate in the Biology Department at the University of Northern Iowa at Cedar Falls, IA. In August of 1973 he accepted an appointment as Sanitarian in the Environmental Health Section of the Alaska Department of Health and Human Services at Palmer, AK and later at Anchorage, a position he occupied until his retirement in 1980.

Glenn authored or coauthored a number of studies on the fleas of Alaska, and in association with Hopla (1965a) and G.P. Holland (1985) made major contributions to our knowledge of the Alaskan flea fauna.

Glenn's enthusiasm for entomology continued into recent years. He was a voracious reader and followed college athletics, and his cutting political observations and wry sense of humor was often shared around the campfire. He passed away in Boulder City, NV after an extended period of poor health.



Glenn on one of our collecting trips in Washington County, Utah. September 2003.



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Darren Copley and Rob Cannings (both Royal BC Museum) survey insects on the logging road to Kitsault, B.C. July 2007. Photo by Claudia Copley.



Darren and Claudia Copley survey insects on the Tlell sand dunes, Haida Gwaii, 2009. Photo by Michelle Connolly.



Male *Antrodiaetus*, likely *pacificus*, observed at the Tlell sand dunes, Haida Gwaii, 2009. Photo by Michelle Connolly.



Carpenter Bee, *Xylocopa californica arizonensis* from a cactus stalk, New Mexico, observed during The Bee Course, August 2012. Photo by Jenny Heron.