

Boreus



Newsletter of the Entomological Society of British Columbia



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Left: Grubs of the European chafer (*Rhizotrogus majalis*). It is a new pest in coastal British Columbia and is expanding its range rapidly. Right: A lawn in Vancouver 'Roto-tilled' by wildlife and birds in search of 'delicacy meal' of chafer grubs. The colorful flags in the background is an example of tactics the homeowners are using to deter birds and wildlife. Photo: Rana Sarfraz.



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The Executive



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

President	Ward Strong BC Ministry of Forests & Range, Vernon
President-Elect	Mike Smirle Agriculture and Agri-Food Canada, Summerland
Past-President	Rob McGregor Douglas College, New Westminster
Secretary	Leo Rankin B.C. Ministry Forests & Range, Williams Lake
Treasurer	Lorraine Maclauchlan B.C. Ministry of Forests & Range, Kamloops
Editorial Committee (Journal)	Dezene Huber (Editor) University of Northern B.C., Prince George Hugh Barclay (Assistant Editor) Canadian Forest Service, Victoria 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
Editors (Boreus)	Jennifer Heron B.C. Ministry of Environment, Vancouver Jeremy deWaard Royal B.C. Museum, Victoria
Directors	Dezene Huber (2 nd) University of Northern B.C., Prince George Arthur Stock (2 nd) B.C. Forest Service, Nelson Tracy Hueppelsheuser (2 nd) B.C. Ministry of Agriculture and Lands, Abbotsford Susanna Acheampong B.C. Ministry of Agriculture, Kelowna Maxence Salomon University of British Columbia, Vancouver
Student Representative	Chandra Moffat UBC - Okanagan, Kelowna
Honorary Auditor	Rob McGregor Douglas College, New Westminster
Regional Director of National Society	Bill Riel Canadian Forest Service, Victoria
Website Editor	Alex Chubaty Simon Fraser University, Burnaby
Web Page	http://entsocbc.ca



Publications of ESBC



Journal of the Entomological Society of British Columbia

The Journal of the Entomological Society of B.C. is published annually. Papers for the Journal need not have been presented at meetings of the Society, nor is it mandatory, although preferable, that authors be members of the Society. The chief condition for publication is that the paper has some regional origin, interest or application. Line drawings or photographs as candidates for the cover are also accepted. Contributions should conform to the standards outlined in the Journal and the Website (<http://blogs.sfu.ca/groups/esbc/publications/journal-of-the-esbc>), and should be sent to the Editor, Dr. Dezene Huber, University of Northern British Columbia, Prince George, 250-960-5119, email: journal@entsocbc.ca

The deadline for submissions to be included in the 2012 issue is September 1, 2012.



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 send correspondence concerning Boreus to the co-editors Jennifer Heron (Jennifer.Heron@gov.bc.ca) and Jeremy deWaard (Jeremy.deWaard@gmail.com), or the new dedicated Boreus email account (boreus@entsocbc.ca).

The deadline for submissions to be included in the December issue is November 15, 2012.



Membership

Membership of the Entomological Society of B.C. is available to anyone interested in entomology. Annual dues are Can\$20.00 (regular member) or Can\$10.00 (student member). Members receive the Journal, *Boreus* and Occasional Papers (the latter published intermittently).

Inquiries concerning membership and back issues should be sent to the Treasurer, Dr. Lorraine Maclauchlan, B.C. Ministry of Forests, 515 Columbia Street, Kamloops, B.C., Canada V2C 2T7; tel 250 828-4179; fax 250 828-4154; 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. Credit Ward Strong and Robert A. Cannings.

Cover Photograph: An RBCM specimen of *Boreus elegans* (ENT000-000254). Photograph by Kellyn Hawley (Biodiversity Institute of Ontario).



Female earwigs are good mamas, at least until the eggs hatch. Photo: Ward Strong.



Society Business – Spring 2012 reports

President's Report

This has been a quiet year so far, with little activity from the President's chair. We decided to support the ESC bid to host the International Congress of Entomology at Vancouver in 2016; I sent a letter of support to Michel Cusson, President of the ESC.

To fill the time, I've decided to have a look at past business. Over the last two years we have made many good resolutions, but follow-up has been sporadic. I've ferreted out the main ones, and they have gone on the agenda for the Spring Executive meeting. Should be a lively meeting!

Ward Strong
President

Regional Director's Report

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.

Some significant changes have occurred in regards to The Canadian Entomologist (TCE). Chris Buddle has taken on the role of Scientific Editor, and a new Editorial Board structure (with subject editors) has been established resulting in remarkably faster manuscript turnaround time. TCE is now published by Cambridge University Press which has resulted in several significant differences: there are no page charges, colour illustrations can be printed at no extra cost to authors and submissions are handled via a user friendly on line submission system. See the Entomological Society of Canada's web site for more details and information:

<http://www.esc-sec.ca/journal.html>

Membership numbers are a source of some concern for the ESC. As a result, there will be something of a membership "push" coming from the national society in the near future. As regional representative, I would like to encourage all ESBC members, especially executive members, to consider joining or keeping up their membership in the ESC.

Bill Riel
Regional Director of National Society



A bumblebee (*Bombus* sp.) dancing around the flower garden. Photo: Peter Belton.



Web Editor's Report

The ESBC has been exploring digitization of past JESBC issues and the implementation of an online journal management system. Transitioning to a fully online, open access journal format has several major advantages over our current system:

- 1) Currently, only a relatively few issues of JESBC are available online but only the most recent issues are available as PDFs and not all of them are searchable. Online publishing will make content fully searchable and is indexed on our site, Google Scholar and other search engines. It can also be indexed through CrossRef DOIs or other online search databases.
- 2) We currently have an annual submission deadline and annual publication “push” that results in a single “crunch time”; online submissions allow us to easily transition to a continuous submission model.
- 3) We are currently doing all submissions and reviews via email, and may differ from editor to editor. Also, copies of digital files have not always been retained by the society, but rather by individual editors. An online journal management system will simplify, streamline and centralize this process. All digital copies are retained in a central database, ensuring a complete collection.

Since the fall AGM I have explored several different online delivery systems, based primarily on:

- cost; • features; • ease-of-use; • robustness, 'future proofing', and support.

I am enthusiastically recommending “Open Journal Systems” (OJS), which provides a complete online submission, peer-review, and editorial workflows. OJS is open-source and is part of SFU's Public Knowledge Project, whose mandate is to expand and improve access to research. Related to the points above:

• COST

- the core software is free, with paid hosting and support offered by SFU
 - Annual cost is \$850 (these fees are waived for SFU faculty)
 - Includes up to 2 hours of support per year

• FEATURES

- includes all core features used by major journals:
 - Publish HTML and PDF versions of articles, with figures, tables, equations
 - subscriber, author, reviewer, editor, and journal manager user roles
 - online article submission, review, editing, and publishing
 - automated email notifications for submissions, review requests, etc.
 - CrossRef DOI integration and PubMed support
 - Paypal integration for subscription/membership fees and journal charges
- Open-source
- Other features: customizable themes (the default theme is ugly)

• EASE-OF-USE

- easy to setup and manage the journal (from a webmaster and editor perspective)



- very easy to submit and review articles
- ROBUSTNESS and SUPPORT
 - well established online publishing system with both paid support and free community support
 - open-source means codebase is well scrutinized, and bugs are reported quickly and fixed
 - all data is stored in open access formats, meaning it's easy to export data and move to a different system in the future (we aren't tied to this platform forever)
 - We retain ownership and copyright for all the content published with this system

Additionally, it is recommended that we setup an internet domain name for the journal site so that in the event that we change hosting providers away from SFU all our URLs, links, and DOIs will remain the same. The cost of a domain name is approximately \$10-15 annually.

In addition to offering OJS support and hosting, SFU library provides digitization services using a commercial high-throughput document scanner and optical character recognition (OCR). As long as our past issues can be fed through the document scanner, the cost will be \$175/h or \$1100/day which they estimate works out to approximately \$0.25/page. This is inexpensive compared to some previous digitization projects which cost between \$0.65-\$7.00 per page (<http://www.ncbi.nlm.nih.gov/pmc/articles/PMC100769/>). The costs referenced in this study include the cost of double-checking the OCR outputs, which are not included in our estimate from SFU. We can do this ourselves at low (or even no) cost by crowd-sourcing the work.

Digitization should proceed in stages, beginning with more recent content and working backward. This way, depending on the amount of archived materials we can space out the work (and costs) of this digitization process over several years if needed.

Another aspect of digital publishing that needs consideration is the services provided by online article databases. Although free databases such as Google Scholar can be used to index our journal content, we will likely wish to broaden the reach of the journal through inclusion in a paid database.

As mentioned above, OJS provides Digital Object Identifier (DOI) integration. DOIs are unique, persistent links to digital files and are used by many publishers. The central



Grove snails (*Cepaea nemoralis*), post copula, near Malakwa, BC. Photo: Lea Gelling.

DOI repository is managed by CrossRef, and requires a paid subscription to register and assign DOIs to published articles. Using CrossRef will cost \$250 per year plus a small fee (less than \$1.00) for each DOI assigned (i.e., per article).

I have setup a demo site for those executives who wish to preview the proposed system. Please let me know if you are interested, and I can pass those details along.

Alex Chubaty
ESBC Web Editor



Editor's report – Journal of the Entomological Society of British Columbia

-The 2011 edition (Vol. 108) is now being printed in Kamloops. Thanks Lorraine!

-Vol. 108 contains four papers, one note, and the abstracts from the talks and symposia at the last ESBC meeting. I am pleased with the quality of the contributions.

-It has been a bit of a learning curve for both myself, as new editor, and our new typesetter.

-So far this year we have received only one submission. One more has been promised, but has not arrived yet.

Several important items:

1. Our current method of handling manuscripts and associated reviewing, page charges, etc., is cumbersome. Over the past year I used some ad hoc methods (Dropbox and Google Documents, particularly) to try to coordinate things better. This was moderately successful, but does not approach the streamlined methods of many journals today.

2. Alex Chubaty has found a good system at SFU to help with #1, above. Both he and I have tried it out. It works well. It has a professional feel. It allows detailed tracking and semi-automated correspondence with authors and reviewers. And it allows for payments to be made via PayPal instead of mailing personal checks, etc. I recommend that we work with this system.

3. Alex has also found a way to have the remaining archives digitalized and curated/cataloged. Again, this seems to me like a good approach.

4. We need more manuscripts! Our number last year was pretty low. Things seem even lower this year. Although there is often a rush right at the end (making life more difficult for all involved in terms of getting the journal together), it's hard to say if we'll get a decent number of papers this year.

5. Because we are now running a continual online publishing model, members should be made aware of the fact that they should also be submitting manuscripts on at any point, not just up against the autumn deadline.

Dezene Huber
JESBC Editor-in-Chief



Two Rocky Mountain clearwing moths (*Hemaris thetis*) in copula near Vernon. Photo: Genevieve Ramsey.



Graduate Student Director's Report

The Student Engagement Committee was initiated subsequent to the fall ESBC AGM in Abbotsford. Emails were sent to contacts at the larger universities in the province: UBC V, SFU, UVic, UNBC, TRU, VIU and UFV – in an effort to recruit a student member from each university. Responses were received from contacts at UBC V, SFU, UVic, UNBC and TRU. Students from UBC V, SFU and UVic stepped forward to join the Student Engagement Committee, along with myself from UBC O and Alex Chubaty from SFU. The Committee will meet to discuss sharing of student relevant information, including grad student and job opportunities. Currently we share such information through the ESBC Facebook group, which now has 46 members.

This fall will conclude my two year term, so a new Graduate Student Director should be sought to begin at the fall ESBC AGM.

Chandra Moffat
ESBC Graduate Student Director





Student Affairs

Graduate Student Director's Note

Happy summer everyone! Whether you are out in the field, in the lab or just working away at your computer I hope you are enjoying some sunny weather and the long days! It saddens me to let you all know my term as Graduate Student Director is coming to an end! We are looking for a new Graduate Student Director, so please contact me if you have any questions! This position has been a great way to get to know entomologists from all over British Columbia, and I highly recommend getting involved! We will also be looking for new members of the Student Engagement Committee from all BC universities, so please let me know if you are interested!

This year's Annual General Meeting of the Entomological Society of British Columbia will be held in the Okanagan Valley. Stay tuned to <http://blogs.sfu.ca/groups/esbc/> and the Entomological Society of British Columbia Facebook page at <https://www.facebook.com/groups/135038946598013/> for more information.

JAM 2012: Joint Annual Meeting of the Entomological Society of Canada (ESC) and the Entomological Society of Alberta

If you are thinking of attending the national meeting this year, the meeting will be held in Edmonton from 4 to 7 November 2012. The deadline to apply for the ESC Ed Becker Conference Travel Award, the abstract submission deadline for the President's Prize Competitions, and the application/abstract submission deadline for the Graduate Student Symposium are all 31 July 2012. All of the information about the meeting can be found at <http://www.entsocalberta.ca/JAM2012/> and more information on awards offered by the ESC can be found at <http://www.esc-sec.ca/studentawards.html>. I strongly encourage use of our ESBC Facebook page to arrange carpooling to Edmonton! If you are interested in being matched with another student to share a hotel room, please email escjam2012roommates@gmail.com and the ESC Student Affairs Committee will try to find you a roommate!

Thanks very much for the opportunity to serve as your Graduate Student Director! I am moving to Fredericton in September to begin my PhD with Stephen Heard at the University of New Brunswick, so I won't see you at an ESBC meeting for a while, but I do hope to see you at JAM 2012!

Chandra Moffat
Graduate Student Director



ESBC Graduate Student Director collecting galls of *Aulacidea pilosellae*, a candidate biological control agent for invasive hawkweeds, in Germany.



ESBC Student Scholarships and Awards 2012

Student Oral Presentation Awards

The Entomological Society of British Columbia announces the annual Student Oral Presentation Awards for the 2012 Annual General Meeting (AGM). Awards will be given for the best student oral presentations in BSc, MSc and PhD categories. The North Okanagan Naturalists Club (NONC) sponsors the James Grant Award of \$400 for the best Master's Student talk. For consideration, students must be registered at a post-secondary institution and at the AGM. Cash prizes will be awarded at the AGM.

Graduate Student Scholarship Competition

The Entomological Society of British Columbia announces the annual Graduate Student Scholarship competition. Two \$400 scholarships (one MSc, one PhD) are awarded each year at the Annual General Meeting. Scholarships must be used to defray costs (including travel) incurred by graduate students for participation in conferences other than the ESBC AGM.

For consideration, applicants must be graduate students and ESBC members in good standing, and must submit a single PDF file containing:

- Name and location of conference to be attended
- Title and abstract of research to be presented
- Current CV

Abstracts should be submitted double spaced, in 12 point font, and with a maximum of 200 words (based on processor electronic word count). Applications will be judged on the basis of scientific importance, quality of the application, and qualifications of the applicant.

Applications should be sent to the ESBC Secretary, Leo Rankin, at c_leo@shaw.ca. Deadline for receipt of applications for 2012 Scholarships is 1 October 2012.



Announcements

Nominations for ESBC Executive

Nominations are sought for election to the ESBC Executive at our AGM on October 11th-12th, 2012. At this year's AGM, we will require nominations for Graduate Student Representative, President-elect, Treasurer and two Directors. Please submit nominations to Rob McGregor (mcgregorr@douglascollege.ca), ESBC Past-President and Chair of the Nominations Committee by September 15, 2012.

JESBC Enhancements: coming Fall 2012

The ESBC executive committee has been working hard to improve the Society's impact by enhancing our online presence to reach more people in BC, as well as the rest of Canada and the world. We are pleased to announce some exciting changes coming this fall to the ESBC:

- a brand new domain name;
- digitization of past issues of the JESBC (abstracts and PDFs will be available online);
- improved access to JESBC content (including enhanced open access);
- a new online journal submission system for the JESBC.

More details will be made available in the following weeks, but needless to say we feel these improvements will greatly enhance the profile of not only the Journal but of the Society itself, and provide unprecedented access to the Society's journal and quarterly bulletin archive dating back to 1906.

Alex Chubaty
ESBC Web Editor



European fire ants (*Myrmica* sp. close to *rubra*); the sting is fuzzy but potent. Photo: Peter Belton.



Call for Papers: Journal of the Entomological Society of BC

You know that, as a graduate student, you probably spend more time browsing around literature cited sections of articles than eating or sleeping (both of which are overrated anyhow). Put some of that time to good use by publishing your literature-related insights in Journal of the Entomological Society of BC.

- Are you a graduate student in the midst (or mist?) of writing your thesis?
- Have you completed your graduate studies and are now working at publishing the different parts of your thesis?
- Are you wondering what, if anything, you can do with your extensive literature review in your thesis introduction?
- Have you taken a graduate course in which you wrote a long (and good!) review on your favourite study organism or on an entomological topic?

If so, the JESBC would like to consider your work for potential publication in an upcoming issue as a review. A good review is a credit to the author(s), can receive many citations, and can be an incredible resource for other researchers.

We are currently accepting submissions for volume 109 of the JESBC, to be published in December 2012. All submissions to the journal undergo peer and editorial review. More information about the journal standards and instructions for authors can be found at the journal homepage (<http://blogs.sfu.ca/groups/esbc/publications/journal-of-the-esbc/>).

Thanks!

Dezene Huber
JESBC Editor-in-Chief



This giant spider hawk, nearly 4 cm long, was having a sip of sweet desert after feeding its larvae fresh meat. Andes mountains, Argentina. Photo: Ward Strong.



Announcement and call for papers for ESBC Annual General Meeting 2011

Mark your calendars! **The Annual General Meeting (AGM) of ESBC will be held in Summerland, BC on Thursday, October 11th and Grape Integrated Pest Management Symposium on Friday, October 12th 2012.** Contributed papers will be presented at the AGM on October 11th at the Pacific Agri-Food Research Centre, 4200 Highway #97, South, Summerland. A symposium and tour will occur on October 12th also at the Research Station.

We are seeking oral presentations for the AGM. Contributions are welcome from members of ESBC, students and other interested entomologists. Please encourage your students to submit papers - Cash prizes will be awarded for best BSc, MSc & PhD student presentations. Oral presentations will be scheduled for 15 minutes each including time for questions.

The tentative schedule for the Grape IPM Symposium is:

- 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

If you are interested in presenting at the ESBC AGM, please send a title and short abstract (50 words or less) via email to Rob McGregor at mgregorr@douglas.bc.ca by October 1, 2012.



Call for nominations for the ESBC Executive

Nominations are sought for election to the ESBC Executive at our AGM on October 14, 2011. At this year's AGM, we will require nominations for President-elect, Treasurer and two Directors. Please submit nominations to Rob McGregor, ESBC President and Chair of the Nominations Committee by September 1, 2011.

Big changes at JESBC

We are delighted to announce that Dezene Huber of UNBC has accepted the position of Editor of the Journal of the Entomological Society of British Columbia. Many thanks are due to Hugh Barclay for his excellent work as Editor over the last three years. Hugh will remain as Assistant Editor of JESBC.

We have also established a new and improved Editorial Board for the journal that includes returning and new members: Rob Cannings, Lorraine Maclauchlan, Bob Lalonde, Steve Perlman, Lee Humble and Rob McGregor will sit on the Editorial Board for 2011.

The Editors and Editorial Board and the ESBC Executive are currently in the process of restructuring the journal. Effective immediately, submissions to JESBC will be accepted continuously throughout the year for a planned online delivery format. Please send your papers to the Editor, Dezene Huber, at huber@unbc.ca.



Volunteers Needed! Proofing of scanned volumes of the Journal of the ESBC

The ESBC is digitizing the entire historical collection of JESBC, from the first volume in 1903 through the present. This will allow unprecedented access to the high-quality regional scientific works represented in our Journal. Alex Chubaty, Director, is spearheading this effort. Old journals will first be digitally scanned, producing basically a photo of each page. Then each individual paper will be converted to a text document by Optical Character Recognition (OCR). These text documents take less storage space, are indexable, and are available for keyword searches by standard computer software.

The automatic OCR process is not error-free. Each paper must be checked by people, comparing the original digital scans with the OCR product. Once each paper is checked, it can go into the database and published on our website. Checking will take about half an hour per paper. This will be an ongoing effort, and volunteers will be required until all the papers are checked. Any help you can offer would be appreciated!

Please contact Alex Chubaty if you are interested in this important and exciting initiative:

Alex Chubaty
achubaty@sfu.ca

New publication: Guide for the Blue-grey Taildropper and similar slugs

This unique publication by slug expert Kristiina Ovaska is part of HAT's program for the recovery of Species at Risk. Our biologists are now meeting with interested landholders who would enjoy participating in HAT's **slug monitoring project** in 2012. Focus areas for volunteer monitoring include private lands around: Thetis, Matheson, and Prospect Lakes, Esquimalt Lagoon, and in the Highlands.

Please consider printing the two page ID guide for your local bulletin board, forwarding this email, or forwarding this email to interested contacts. To order copies or to volunteer with HAT's Taildropper monitoring program please call Todd Carnahan ([250.995.2428](tel:250.995.2428)).

For an online version of this guide and more information about HAT's outreach project visit:
<http://www.hat.bc.ca/blue-grey-taildropper-slug-stewardship.html>

Todd Carnahan
Land Care Co ordinator
Habitat Acquisition Trust
www.hat.bc.ca



Sweep of the Net

A miscellany of recent entomological media caught on the internet.

The new official blog of the Entomological Society of Canada:

<http://escsecblog.com/>

An incredible NPR story on the Lord Howe stick insect:

<http://www.npr.org/blogs/krulwich/2012/02/24/147367644/six-legged-giant-finds-secret-hideaway-hides-for-80-years>

Recent BBC articles and media on insects:

<http://www.bbc.co.uk/nature/life/Insect/news>

Audio podcast from CBC's 'Quirks and Quarks' about male moths' optimum temperature for flight and the pursuit of females:

<http://www.cbc.ca/quirks/episode/2012/06/28/web-extra-2012/>

Blog for the BIObus, the Biodiversity Institute of Ontario's field-collecting RV, currently visiting 14 Canadian National Parks collecting arthropods and doing public outreach:

<http://biobus.ca/>

The new Twitter feed for the ESBC:

<https://twitter.com/EntSocBC>

The new Facebook page for the ESBC:

<http://www.facebook.com/groups/135038946598013/>

An interesting video on digger bees, as posted on the 'Bug Girl's Blog':

<http://membracid.wordpress.com/2012/08/03/solitary-bees/>

A tasty website with all the details on edible insects and 'entomophagy':

<http://girlmeetsbug.com/>

A Science Friday blog post and video on 'Amazing Insect Feats':

<http://sciencefriday.com/blogs/07/11/2012/amazing-insect-feats.html>

The Vimeo site for the 'Bug Chicks' (thebugchicks.com) with dozens of highly entertaining educational videos on insects:

<http://vimeo.com/thebugchicks>

Website for 'ArthroBots', metal sculptures of arthropods by Tom Hardwidge:

<http://www.arthrobots.com/>

Audio podcast from CBC's 'Quirks and Quarks' about fire-chaser beetles and the sensitivity of their heat-detecting sensors:

<http://www.cbc.ca/quirks/episode/2012/06/02/june-2-2012/>



A 'Science Daily' news story on how insects and spiders (and birds) are colonizing nature reserves as the move north in response to climate change:

<http://www.sciencedaily.com/releases/2012/08/120813155243.htm>

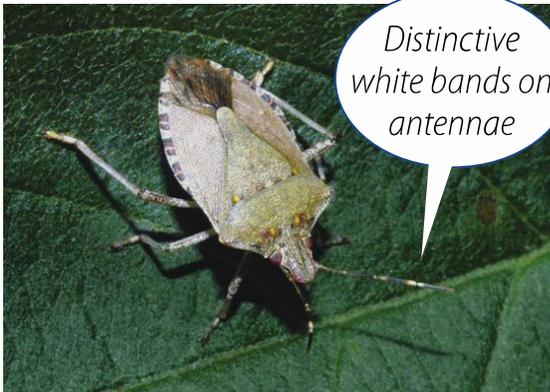
NY Times article discussing how wasps harbour yeast through the winter, benefitting the viniculture:

<http://www.nytimes.com/2012/08/07/science/dont-swat-that-bug-it-may-be-working-on-next-years-vintage.html>

An RBCM webpage on the introduction of non-indigenous species in BC:

<http://alienspecies.royalbcmuseum.bc.ca/eng/content/home>

Have you seen this bug?



The brown marmorated stink bug, though not yet detected in British Columbia, is a serious pest of tree fruit, vegetables, ornamentals and other host plants. The BC Fruit Growers Association and Ministry of Agriculture are asking for your help to report any sighting of this pest to:

Susanna Acheampong, BC Ministry of Agriculture, Kelowna

Susanna.Acheampong@gov.bc.ca

Phone: 250-861-7230 Toll-Free: 1-888-332-3352

Please visit www.al.gov.bc.ca/cropprot/bmsb_alert.pdf for more details.



BRITISH
COLUMBIA



Calendar of events

SEPTEMBER 2012						
S	M	T	W	T	F	S
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30						

OCTOBER 2012						
S	M	T	W	T	F	S
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			

NOVEMBER 2012						
S	M	T	W	T	F	S
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	

Oct. 11-12 – ESBC Annual General Meeting & Symposium, held at the Pacific Agri-Food Research Station in Summerland, BC

Nov. 3-7 – 2012 Joint Annual Meeting of the Entomological Society of Alberta and the Entomological Society of Canada, held at the Coast Edmonton Plaza Hotel in Edmonton, Alberta

Nov. 11-14 – Annual Meeting of the Entomological Society of America, held in Knoxville, Tennessee.

Nov. 15 – Submissions for the next issue of *Boreus* are due

Nov. 25-28 – AGM and Scientific Congress of the Australian Entomological Society, in Tasmania, Australia



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These tiny false spider mites (Tenuipalpidae) are no longer than 100 micrometers, yet they quickly defoliated the China Doll houseplant they were found on. Photo: Ward Strong.

