

Boreus



Newsletter of the Entomological Society of British Columbia



June 2009
Volume 29 (1)



Mt. Maxwell Ecological Reserve, Salt Spring Island, May 13, 2009.



Carina Maslovat, takes a photograph of the Red-listed plant, *Lomatium grayii*, at Mt. Maxwell Ecological Reserve, May 2009.



Lea Gelling, B.C. Conservation Data Centre, contemplates netting random insects in the broom bushes at Iona Beach Regional Park, May 2008.

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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.

Entomological Society of B.C. Executive

President	Sheila Fitzpatrick Agriculture and Agri-Food Canada, Agassiz
President-Elect	Tom Lowery Agriculture and Agri-Food Canada, Summerland
Past-President	John McLean University of British Columbia, Vancouver
Secretary / Treasurer	Lorraine Maclauchlan B.C. Ministry of Forests & Range 515 Columbia Street, Kamloops, B.C., Canada V2C 2T7
Editorial Committee (Journal)	Hugh Barclay (Editor), Canadian Forest Service, Victoria Robert Cannings, Royal B.C. Museum, Victoria Lorraine Maclauchlan, B.C. Min. Forests & Range, Kamloops Sheila Fitzpatrick, Agriculture and Agri-Food Canada, Agassiz
Editor (Boreus)	Jennifer Heron, B.C. Ministry of Environment, Vancouver
Directors	Leo Rankin, (1st), B.C. Ministry Forests & Range, Williams Lake Dezene Huber (1st), University of Northern B.C., Prince George Alida Janmaat (1st), University of the Fraser Valley, Abbotsford Jim Corrigan (2nd), B.C. Ministry Forests & Range, Vernon Rob McGregor (2nd), Douglas College, New Westminster
Student Representative	Melanie Hart, Simon Fraser University, Burnaby
Honorary Auditor	John McLean, University of British Columbia
Regional Director of National Society	Bill Riel, Canadian Forest Service, Victoria
Web Page Editor	Bill Riel, Canadian Forest Service, Victoria
Web Page	http://www.sfu.ca/biology/ESBC/



Publications of the 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://www.sfu.ca/biology/ESBC/>), and should be sent to the Editor, Dr. Hugh Barclay, Canadian Forest Service, Pacific Forestry Centre, 506 West Burnside Road, Victoria, British Columbia, Canada, V8Z 1M5 Email: HBarclay@pfc.cfs.nrcan.gc.ca

The deadline for submissions to be included in the 2009 issue is September 1, 2009.

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 Editor, Jennifer Heron (Jennifer.Heron@gov.B.C..ca).

The deadline for submissions to be included in the December 2009 issue is November 15, 2009.



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 Secretary/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: Lorraine.Maclauchlan@gov.B.C..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: Taken at Red Rocks National Park outside of Las Vegas, April 26, 2009.



Cool looking *Tachina* fly species (Family Tachinidae), parasitoids of Lepidoptera. Photo taken at Malakwa (between Revelstoke and Sicamous), summer 2008. Photo by Angie Vandenberg.



Society Business

Message from the President

It is a pleasure and a privilege to steer the Entomological Society of British Columbia through 2009. We have an excellent and enthusiastic group of people on the Executive, and they represent many of the entomological hotbeds of the province. Tom Lowery brings expertise from the orchards and vineyards of the Okanagan. Dezene Huber, Leo Rankin and Lorraine Maclauchlan are right in the midst of mountain pine beetle territory – Prince George, Williams Lake and Kamloops. Jim Corrigan represents conifer seed and cone orchards in the North Okanagan. Closer to Vancouver, we have Rob McGregor at Douglas University; Alida Janmaat at University of the Fraser Valley; our editor of *Boreus*, Jenny Heron; and our first ever Graduate Student Director, Melanie Hart. From Victoria, we have our representative to the Entomological Society of Canada, Bill Riel, and our Journal editor, Hugh Barclay. Our past President, John McLean, knows forest entomology throughout British Columbia, most recently Stanley Park.



I invite all ESBC members, **especially graduate and undergraduate students**, to attend our Annual General Meeting on Friday, October 2, 2009. For the first time in many, many years, the AGM will be held in Kamloops. This is a wonderful opportunity for urban and suburban entomologists to step into the central region of our province, where forest and grassland ecosystems are intertwined. On Saturday, October 3, we are hosting a symposium on this theme, with the tentative title: “Grasslands Ecology and Conservation OR Outbreaks and Invasives: Are we out of control?” The Symposium will include a short field tour of some of the most interesting and topical entomological issues in the Kamloops region.

I look forward to seeing you all there!

Sheila Fitzpatrick
President, ESBC



ESBC 2009 Elections

This year's elections are for *President-Elect* and two *Director* positions. Directors serve a term of two years. Please fill out your ballot (enclosed in this mail out) and mail back to:

Lorraine Maclauchlan,
ESBC Secretary/Treasurer,
B.C. Ministry of Forests,
515 Columbia Street,
Kamloops, B.C., Canada V2C 2T7

by the specified date and according to the directions on the ballot.

Candidates for ESBC Director 2009 – 2011

Three candidates are running for ESBC Director 2009 – 2011:

Jim Corrigan, Naomi Delury and Ward Strong.

Jim Corrigan

Hello, Jim Corrigan here. I am a candidate for election as a Director of the Entomological Society of British Columbia.

I studied insect ecology and biological control at the University of Guelph (BScAg, 1980) and Rutgers University (Msc, 1988) and obtained my teaching certificate (BEd) from the University of Western Ontario in the spring of 2001. I worked as a Research Associate in the Biological Control Laboratory at the University of Guelph from 1990-2003, and taught four undergraduate courses for the Department of Environmental Biology between 1997 and 2003. From 2000 to 2005, I ran my own entomological consulting business. Becoming a B.C. resident in the spring of 2006, I now have three year's experience as the Interior Seed and Cone Pest Management Biologist with B.C. Ministry of Forests and Range at the Kalamalka Forestry Centre in Vernon.



With respect to Society work, I served two terms on the Board of Directors of the Entomological Society of Ontario. I was President of



this Society in 2003, and have worked on (or chaired) Local Arrangement, Student Affairs, Public Education and Election Committees for several entomological societies. Since coming to B.C., I have served one term as a Director of the Entomological Society of British Columbia and I'm involved with the organization of the Joint Annual Meeting of ESC/ESBC that our Society is hosting in Vancouver in 2010.

On a personal level, I'm a former competitive curler, and an enthusiastic (if not too skilled!) fly fisher, a reader and a sports fan.

Smaller regional societies are most successful when their elected Officers exhibit a dedicated volunteer spirit. If elected, I will strive to be a productive member of the Board of Directors of the ESBC with a personal focus on the role of our Society can serve in public outreach/education of entomology in British Columbia.

Naomi Delury

I became interested in Entomology as a career during my undergraduate degree in Biology at Simon Fraser University (1994).



As a co-op student, I was fortunate to work as a Forest Health Technician for the B.C. Ministry of Forests in the Prince Rupert Forest Region and as a Research Assistant for the Chemical Ecology Group at SFU. I pursued a Master of Science degree at SFU under the direction of Gerhard Gries and Gary Judd, studying insect communication. I conducted research on semiochemicals of *Ascogaster quadridentata*, a parasitoid of *Cydia pomonella*, identifying its sex pheromone and an attractive blend of kairomones. After graduating in 1998, I worked as a Statistical Consultant (SFU, 1999) and an Insect Chemical Ecologist (Biologist, Agriculture and Agri-Food Canada, Pacific Agri-Food Research Center, 1999- 2002). I now reside in Summerland, B.C., where I have worked as an Insect Ecology Technician for Agriculture and Agri-Food Canada since 2003, investigating insects and mites inhabiting cherry trees and fruit. I have previously served one term as a Director of the Entomological Society of British Columbia, and would welcome the opportunity to do so again.



Ward Strong

I work with the B.C. Ministry of Forests, Research Branch, as a cone and seed pest research scientist. My studies of taxonomy, life histories, monitoring, and ecological aspects of pests are used to develop integrated pest management plans and on-site seed orchard recommendations to ensure the long-term productivity of the

Province's seed orchards. I have collaborative projects with other researchers in B.C., across Canada, and in the USA. It has been fun and productive working with such a diverse bunch of people. The three grad students working with me have really brightened up the Kalamalka Forestry Centre in Vernon, my home base for seed orchard pest research.



I was a Director for the ESBC in the mid-1990s, and the Web Editor from 1998 to 2001. In 2001 I took on the editorship of the Journal of the ESBC after Dave Raworth stepped down. Over the next 6 years, some major changes made to the Journal included a new, 2-column format, moving

to electronic submissions and review, desktop digital publishing, elimination of paper reprints, and timely publication, with the mail-out occurring in the year of publication. The Journal is now in the capable hands of Hugh Barclay. In 2004, I organized the audio-visuals for the ESC-ESBC JAM in Kelowna, and currently chair the Scientific Program committee for the 2010 JAM in Vancouver. I have been an active member of the Society and continue to actively strive for improvements. I hope to become involved again as a Director on the Executive Committee.



Candidate for ESBC President-Elect 2009 – 2010

Rob McGregor

Rob McGregor has broad interests in insect biology but has spent much of his career studying entomophagous insects and their use in biological control. Rob completed his MPM at SFU with Manfred Mackauer where he studied pea aphid parasitoids. He completed his PhD at SFU in Bernie Roitberg's lab where he studied the influence of parasitoids on life-history timing in a leafmining moth. More recently, Rob has conducted research on the omnivorous Heteropteran predator, *Dicyphus hesperus*, on egg parasitoids in the genus *Trichogramma*, and on Carabid beetle communities in urban forest fragments. Rob currently teaches biology and environmental science at Douglas College where he also directs the Institute of Urban Ecology. Rob

has served on the Executive of ESBC on several occasions and is currently a Director of ESBC.



Mylitta Crescent, *Phyciodes mylitta*, Denman Island, May 2009.



Greater Night-stalking Tiger Beetle, *Omus dejeanii*, May 2009, Denman Island.



Announcement

2009 Entomological Society of B.C. **Annual General Meeting** and **symposium (title to be announced)**

For more information about the ESBC AGM and Symposium contact:

Sheila Fitzpatrick,
ESBC President
Email:
Sheila.Fitzpatrick
@AGR.GC.CA

This year's AGM and Symposium will be held in Kamloops. The AGM will include oral presentations and posters by members and students. Members of the general public are also welcome to attend.

When	Presentations and AGM --- Friday, October 2, 2009 Symposium --- Saturday, October 3, 2009
Time	9:30 am – 5:00 pm AGM (lunch included in registration fee).
Cost	\$20 per day; \$10 for students and amateur entomologists
Where	Henry Grube Education Centre 245 Kitchener Crescent, Kamloops The Henry Grube Education Centre is located on the north shore of Kamloops, and there are many hotels in downtown Kamloops area.

Annual General Meeting: submit **titles and abstracts for presentations and posters** (50 words maximum) by **Friday, September 25th** to Rob McGregor (r_mcgregor@douglas.B.C..ca).

AGM Student Competition Prizes: These prizes of \$300 each are awarded to the top student papers presented at the ESBC Annual General Meeting, one in the Master's Degree category, and one in the Ph.D. degree category. Funds are generously provided by the **North Okanagan Naturalists Club** (James Grant Award for best M.Sc. presentation) and **Phero Tech Inc.** (Harold Madsen award for best Ph.D. presentation). No application is necessary; any student presentation at the AGM is automatically included. Submit titles and abstracts for presentations to Rob McGregor (r_mcgregor@douglas.B.C..ca).



Winners of the annual *MSc and PhD Graduate Student Travel Scholarships* will be announced at the AGM. These awards consist of \$500 each to attend conferences other than the ESBC AGM. See the following page (page 12) in *Boreus* for more details on how to apply for these scholarships.

Symposium: This year's symposium will address topics in grasslands ecology and address topics on the entomological outbreaks in B.C.'s interior forests. Watch the website for updates.



Geoff Scudder and Len Kelton, May 16 – 20, 1960. Photo Spencer Entomological Museum, U.B.C..



Scorpion under ultra-violet light, Borneo, 2008. Photo Paul Grant.



ESBC 12th Annual Graduate Student Scholarships

The *Entomological Society of British Columbia* announces the twelfth annual Graduate Student Scholarship competition. Two \$500 Scholarships (one M.Sc., one Ph.D.) are awarded each year at the Annual General Meeting. Scholarships are to be used to defray research paper or poster presentation related 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 Word file containing:

- name and locality of conference to be attended
- title and abstract of research to be presented
- current CV

Abstract should be double spaced, 12 font, and a **maximum** of 200-250 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 from M.Sc. and Ph.D. students will be judged in separate categories; a singleton application in either category will be judged with applications in the other.

Deadline for receipt of applications for 2009 Scholarships is 18 September 2009.

This year's scholarships will be awarded during the ESBC Annual General Meeting, 2 October 2009 in Kamloops.



Dromedary Jumping-slug, near Tofino, September 2008.

Send applications via email to:

Lorraine Maclauchlan

Secretary/Treasurer, ESBC

B.C. Ministry of Forests,

515 Columbia Street, Kamloops, B.C., Canada V2C 2T7

Email: Lorraine.Maclauchlan@gov.B.C..ca



Announcement

Entomological Societies of Canada & Manitoba



ES^CM^M2009

Winnipeg, 18-21 October



Hotel Fort Garry, Winnipeg, Manitoba

Invitation from the organizing committee: On behalf of the Entomological Societies of Manitoba and Canada we are pleased to invite you to attend the 2009 Joint Annual Meeting.

The meeting will be held at the historic Hotel Fort Garry, a full service hotel that is a short walk from The Forks Markets and Entertainment Complex located in downtown Winnipeg. The hotel is approximately 20 minutes by cab from the airport and 5 minutes by foot from the train station. We encourage you to stay at the Hotel to be close to the meeting location and to help keep our meeting costs down. The local organizing committee has negotiated an excellent guestroom rate: \$129 per night plus taxes, double occupancy. Each additional adult is \$10 (maximum two additional adults).

Registration rates remain unchanged from 2008 with early registration being the wisest choice. Rates are \$265/365 (early/late) for regular members, \$100/160 for student and retired members. One day registration and guest tickets for the banquet are also available.



Sophie-Anne Blanchet and Laura Parkinson, B.C. Conservation Corp Invertebrate Survey biologists, catch their first Taylor's Checkerspot butterfly on a rainy May day, 2009



Joint Annual Meeting of the Entomological Society of Canada and the Entomological Society of Manitoba October 18 – 21, 2009

Plenary symposium

- *Climate Change: from Geology to Ecology, History of glacial Lake Agassiz and climate since the last Ice Age, as reflected in lake sediments.* Dr James Teller, University of Manitoba.
- *Evolution and Climate Change: potentials and pitfalls*
Dr Camille Parmesan, University of Texas
- *Future shock: invasive insects, climate change, and Canada's forest ecosystems.* Dr Shelley Hunt, University of Guelph.

Symposia

- Apiculture: Bee - Virus Interactions
- Arthropod Host-symbiont Relationships: Diversity, Distribution and Ecology
- Biological Survey of Canada Symposium
- Canadian Forum on Biological Control Symposium: *Putting the 'I' Back Into IPM* – How To Integrate
- Biological Control Effectively In IPM Programs
- Entomological Issues in Potato Production
- Graduate Student Symposium
- Pollination Biology
- Protecting Urban Forests and Structures from Insects
- Wood to Soil: the Role of Arthropods in Forest Nutrient Cycling

Heritage lecture

History of Beekeeping Research in Western Canada. Donald Dixon

Important Dates

- 31 March 2009 Registration website opens
- 01 June 2009 Paper submission website opens
- 15 July 2009 Deadline for paper submissions
- 15 August 2009 Early registration deadline
- 15 September 2009 Hotel booking deadline

Associated meetings

- Western Forum/Western Committee on Crop Pests/Western Committee on Plant Diseases Oct. 15-17, 2009.
- Biological Survey of Canada October 21-22, 2009.
- Canadian Forum on Biocontrol October 19, 2009.

For further information, see <http://home.cc.umanitoba.ca/~fieldspg/ESC2009.html>
Or contact the meeting chair at Brent.Elliott@gov.mb.ca



Thatch ant nest located at the summit of Mt. Tuam, Salt Spring Island, May 2009.



Joint Annual Meeting of the Entomological Society of Canada and the Entomological Society of Manitoba October 18 – 21, 2009

Tentative meeting schedule:

Sunday October 18

13:30 – 14:30 Introductory Remarks, Gold Medal Address
14:30 – 15:00 Break
15:00 – 17:30 Plenary Symposium
19:30 – 22:00 Mixer

Monday October 19

08:30 – 10:00 Student Paper Sessions
10:00 – 10:30 Break
10:30 – 12:00 Student Paper Sessions
12:00 – 13:30 Lunch
13:30 – 16:30 Graduate Student Symposium
13:30 – 16:30 Biological Control Forum Symposium
13:30 – 16:30 Contributed Papers
16:30 – 17:30 Poster Session (refreshments will be served)

Tuesday October 20

08:30 – 12:00 Arthropod Host-Symbiont Relationships: Diversity, Distribution and Ecology
08:30 – 12:00 Protecting Urban Forests and Structures from Insects
08:30 – 12:00 Contributed papers
10:00 – 10:30 Break for all sessions
12:00 – 13:30 Lunch
13:30 – 16:00 Pollination Biology
13:30 – 16:00 Wood to Soil: the Role of Arthropods in Forest Nutrient Cycling
13:30 – 16:00 Entomological Issues in Potato Pest Management
16:00 – 16:30 Break
16:30 – 17:00 Heritage Lecture – History of Beekeeping Research in Western Canada
17:00 – 18:00 Annual General Meeting of the Entomological Society of Canada
18:00 – 19:00 Cocktails
19:00 – 22:00 Banquet

Wednesday October 21

08:30 – 12:00 Bee-Virus Interactions
08:30 – 12:00 Contributed Papers
08:30 – 12:00 Biological Survey of Canada Symposium: Terrestrial Arthropod Surveys in
Canada: Purpose, Progress, and Plans
10:00 – 10:30 Break
12:00 Adjourn



Blue-grey Taiddropper slug, Capitol Regional District,
Victoria, May 2008. Photo Kristina Ovaska.

For further information, see <http://home.cc.umanitoba.ca/~fieldspg/ESC2009.html>
Or contact the meeting chair at Brent.Elliott@gov.mb.ca



Announcement

Joint Annual Meeting of the Entomological Society of Canada and Entomological Society of British Columbia

will be held at the

Coast Plaza downtown Vancouver,
October 31 - November 2, 2010



The theme, logo, sponsors, symposia, concurrent meetings, organizing committee and events are all still being planned. If you would like to be part of the planning committee for the 2010 ESC-ESBC JAM, See <http://www.sfu.ca/biology/ESBC/> for upcoming announcements or contact Bill Riel (Conference Chair) at Bill.Riel@NRCan-RNCan.gc.ca.

Random photos from the field



Liverworts (species unknown) are the host plants for a rare primitive moth *Epimartyria* spp. at Belcarra Regional Park, Coquitlam. Photo David Holden.



Rare primitive moth, *Epimartyria* spp., found at Belcarra Regional Park, 2009. Photo David Holden.

Do you have a random photo from the field? Email a copy to Jennifer.Heron@gov.B.C..ca



Upcoming meetings and conferences

Year 2009

The American Institute of Biological Sciences Annual Meeting, “Sustainable Agriculture: Greening the Global Food Supply,” will be held May 18-19, 2009 in Washington, DC. URL: http://www.aibs.org/annual-meeting/annual_meeting_2009.html

A Bean Beetle Curriculum Development Workshop will be held at Emory University, Atlanta, Georgia, from May 20-22, 2009. The purpose of the workshop is to introduce faculty who are currently teaching laboratory courses at US colleges and universities to this exciting new model system for teaching undergraduate laboratory courses and engage them in designing new laboratory protocols using bean beetles in the fields of physiology and neurobiology. More info at <http://www.beanbeetles.org/network/workshop.html>.

The International Forum for Surveillance and Control of Mosquitoes and Mosquito-Borne Diseases will be held May 25-29, 2009 in Beijing, China. Contact Dr. Rui-De Xue at xueamcd@bellsouth.net or (904) 471-3107.

The Worldwide Dragonfly Association’s International Congress of Odonatology will be held in Xalapa, Mexico, June 7-12, 2009. URL: <http://www.odonatology2009.org>

The 8th International Symposium on Aphids will be held June 8-12, 2009 in Catania, Italy. URL: <http://www.8isasicily.net>

A Symposium on Biomathematics and Ecology Research and Education will be held June 13-17, 2009 in Izmir, Turkey. Contact: Dr. Olcay Akman, (309) 438-7980, or oakman@ilstu.edu. URL: <http://www.biomath.ilstu.edu/berc>

An Invasive Species Workshop and Seminar Series will be held by the City of Saskatoon and the Saskatchewan Ministry of Environment June 18-19, 2009. Contact Jeff Boone at jeff.boone@saskatoon.ca.

The Dragonfly Society of the Americas Annual Meeting will be held June 19-June 21, 2009 at the Comfort Inn in Sullivan, Missouri. Contact Paul McKenzie (paul_mckenzie@fws.gov) or Jane Walker (j.walker_smentowski@yahoo.com). URL:



Mt. Maxwell Garry Oak Ecological Reserve, Salt Spring Island, May 2009.



<http://www.odonatacentral.org/index.php/PageAction.get/name/DSAAnnualMeeting>

The 10th International Congress of Orthopterology will be held June 21-25, 2009 in Antalya, Turkey. URL: <http://www.ico2009.org>



Katydid in Belalong Forest, Borneo, 2008. Photo Paul Grant.

The Sixth International Conference on Arthropods: Chemical, Physiological, Biotechnological and Environmental Aspects will be held in Ochotnica Dolna, Poland, June 21-26, 2009. Contact dk@wchuwr.pl. URL: <http://V1arthropods.stud.wchuwr.pl>

Entomology 2009, the national meeting of the Royal Entomological Society, will be held July 15-17, 2009 in Sheffield, UK. Contact Jens Rolff at jor@sheffield.ac.uk. URL: <http://www.royensoc.co.uk/meetings.shtml>

The combined **First meeting of BioSyst EU** and the **Seventh Biennial Conference of the Systematics Association** will be held August 10-14, 2009 in Leiden, Holland. The conference will be the first of a series of quadrennial European conferences for biological systematics. URL: <http://www.biosyst.eu>

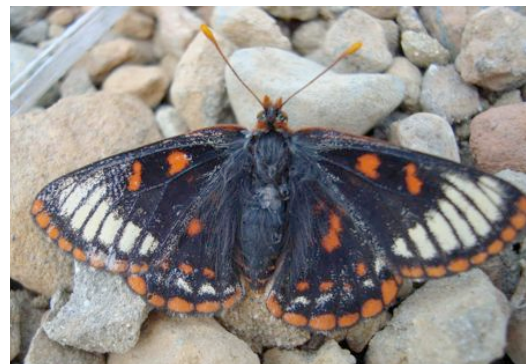
The 8th Meeting on Soil Insect Pests will be held August 26-28, 2009, in Monterrey, Mexico. For more information contact rodriguez.luis@inifap.gob.mx.

The 7th International Conference on Plant Protection in the Tropics will be held August 27-29, 2008 at the Hotel Nikko in Kuala Lumpur, Malaysia. URL: <http://www.mapps.org.my/7thCPPT/>

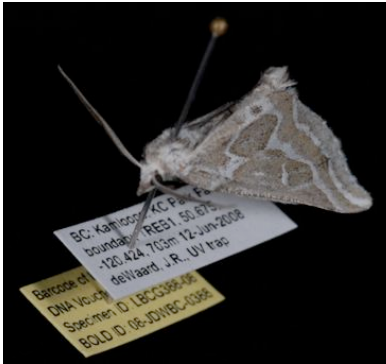
Harmonia axyridis and other invasive ladybirds, International Organization for Biological and Integrated Control of Noxious Animals and Plants. September 6 – 10, 2009. Engelberg, Switzerland. <http://www.ioB.C.-harmonia-meeting.com/>

The XVIIth International Congress for Tropical Medicine and Malaria (ICTM2008) will be held in Jeju Island, Korea, September 29 - October 3, 2008. URL: <http://www.ictm17.org>

The Entomological Society of Canada's Annual Meeting will be held in Winnipeg, October 18-22, 2009. URL: <http://home.cc.umanitoba.ca/~fieldspg/>



Melanic morph of Taylor's Checkerspot butterfly, *Euphydryas editha taylori*, Denman Island, May 2009.



A Sagebrush Girdle moth (*Plataea trilinearia*) from Kenna-Cartwright Park, Kamloops, 2008. Photo Jeremy deWaard.

ESC2009_files/index.htm

The 5th Multilateral Initiative on Malaria's Pan- African Malaria Conference will be held November 2-6, 2009 in Nairobi, Kenya. URL:

<http://www.mimalaria.org/pamc>

The Second National Meeting of the National Plant Diagnostic Network will be held December 6-10, 2009 at the Intercontinental Hotel in Miami, Florida. Contact Amanda Hodges at achodges@ufl.edu or (352) 392-1901, ext 199. URL:

<http://www.apsnet.org/meetings/NPDN/default.htm>

The 2009 ESA Annual Meeting will be held on December 13-16, 2009, at the Indianapolis Convention Center in Indianapolis, Indiana. *Contact:* [ESA Annual Meeting](#), 10001 Derekwood Lane, Suite 100, Lanham, MD 20706, phone 301-731-4535, fax 301-731-4538

Year 2010

The Joint Annual Meeting of the Entomological Society of Canada and Entomological Society of British Columbia will be held in Vancouver, British Columbia, October 31 – November 2, 2010 at the Coast Plaza Hotel and Suites, downtown Vancouver. See <http://www.sfu.ca/biology/ESBC/> for upcoming announcements or contact Bill Riel (Conference Chair) at Bill.Riel@NRCan-RNCan.gc.ca.



Other events in 2010

The Annual Meeting of the Southwestern Branch of the Entomological Society of America will be held in Cancun, Mexico, April 11-17, 2010. It will be a joint meeting with the Mexican Entomological Society. URL:

<http://swbesa.tamu.edu>

The 9th European Congress of Entomology will be held August 22-27, 2010 in Budapest, Hungary. URL: <http://www.nhmus.hu/ECE2010/>

The 2010 ESA Annual Meeting will be held on December 12-16, 2010, at the Town and Country Hotel and Convention Center in San Diego, California.

Contact: meet@entsoc.org, 10001 Derekwood Lane, Suite 100, Lanham, MD 20706, phone 301-731-4535, fax 301-731-4538

Year 2011

The 2011 Entomological Society of America Annual Meeting will be held on November 13-16, 2011, at the Reno-Sparks Convention Center in Reno, Nevada. *Contact:* meeting@entsoc.org, 10001 Derekwood Lane, Suite 100, Lanham, MD 20706, phone 301-731-4535, fax 301-731-4538



Introduced Canary-shouldered Thorn moth (*Ennomos alniaria*) near light trap at Westham Island, Delta, August 2008. Photo Jeremy deWaard.



Notes from the Field



View from Mount Kinabalu, Borneo. Photo Paul Grant.

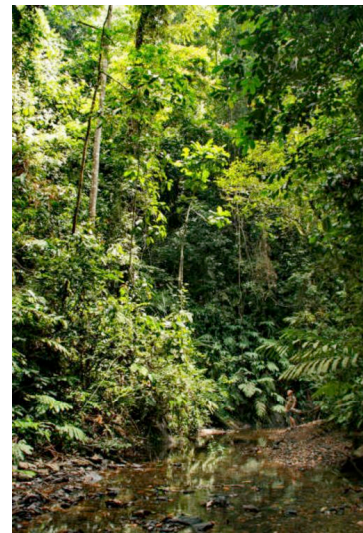
Responding to conservation shortfalls on the island of Borneo, the *Heart of Borneo Initiative* was instigated by the World Wide Fund for Nature (WWF). In February 2007 the governments of Brunei Darussalam, Indonesia and Malaysia signed the Heart of Borneo Declaration, a tri-country declaration that seeks to conserve and sustainably manage some 220 000km² of tropical rainforest – almost a third of the island of Borneo.

The Kuala Belalong Field Study Centre (KBFSC), run by the Universiti Brunei Darussalam (UBD), is situated at Kuala Belalong, on the north-western boundary of the Batu Apoi (Ulu Temburong) forest reserve forming what in my opinion is the core of the *Heart of Borneo Initiative*. No logging has been allowed in the Batu Apoi reserve itself, and so KBFSC provides an ideal base for research, especially for invertebrates, as it provides a pristine area to examine natural species behaviour and diversity trends. The vegetation of the area is a mixed dipterocarp lowland forest.

Following are some photographs taken by Paul Grant during a 2008 survey of the Batu Apoi Forest Reserve. Paul completed his undergraduate degree from the University of Victoria and is now finishing his PhD at the University of Stellenbosch, South Africa, with Michael Samways.



Butterfly in Belalong forest, Brunei, 2008. Photo Paul Grant.



Forest in Belalong, Brunei, 2008. Photo Paul Grant.



Forest in Belalong, Brunei, 2008. Photo Paul Grant.



Tarantula in Belalong forest, Brunei, 2008. Photo Paul Grant.



Phasmid in Belalong forest, Brunei, 2008. Photo Paul Grant.



Dawn at forest canopy research tower, Belalong, Brunei, 2008. Photo Paul Grant.



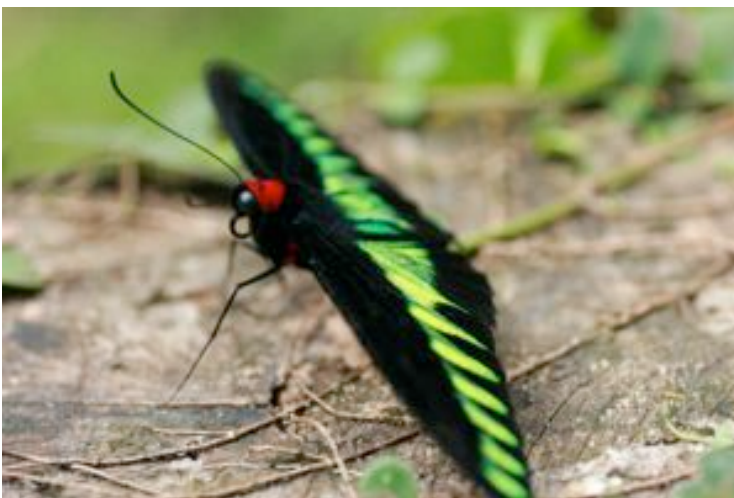
Forest in Belalong, Brunei, 2008. Photo Paul Grant.



Rajah Brooke's Birdwing Butterfly, Belalong, Brunei. Photo Paul Grant.



Katydid in Belalong forest, Brunei, 2008. Photo Paul Grant.



Rajah Brooke's Birdwing Butterfly, Belalong, Brunei. Photo Paul Grant.



Forest in Belalong, Brunei, 2008. Photo Paul Grant.



Colour Plate of *Coenonympha* taxa in Western Canada

Western Canada *Coenonympha* taxa

Scale = life size

Images © NG Kondla

All specimens are males

mackenziei 2006-6-22, nr. Hay River,
NWT, leg J Beck



yukonensis 1990-7-5, Ogilvie Mtns.,
YK, leg NG Kondla



kodiak 2005-7-13, Ruby Mtn.,
B.C., leg NG Kondla



inornata 2008-7-3, The Pas,
MB, leg JL Harry



benjamini 2008-6-26, Crowsnest Pass,
B.C., leg NG Kondla



sweadneri 2007-6-4, nr Creston,
B.C., leg NG Kondla



columbiana 2001-7-4, Aspen Grove,
B.C., leg NG Kondla



insulanus 1979-5-8, Duncan,
B.C., leg R Guppy



Compiled and submitted by Norbert Kondla.

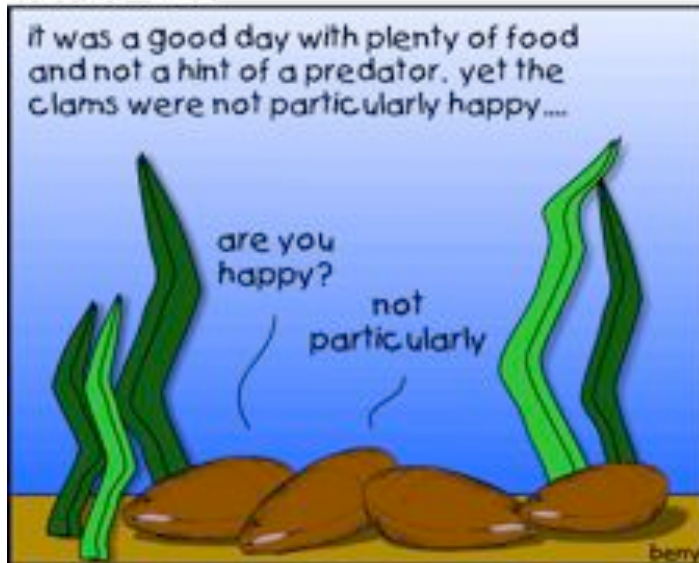


Do you have artistic talent? Do you have a good entomological joke? Send your ideas to the Boreus editor for the December 2007 issue

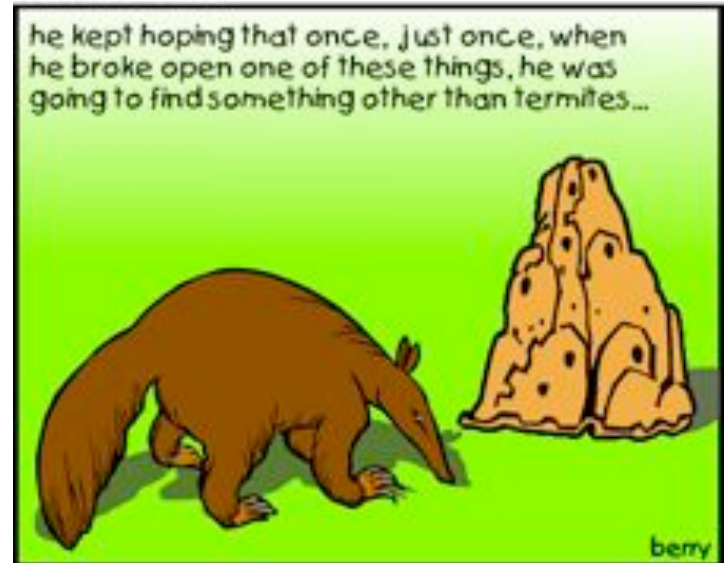
Entomological Humour

Berry Wijdeven is a Species At Risk Biologist for the B.C. Ministry of Environment in Queen Charlotte/Haida Gwaii. Berry's work has been published in *McLeans*, 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.B.C..ca

nature calls



nature calls



nature calls



nature calls

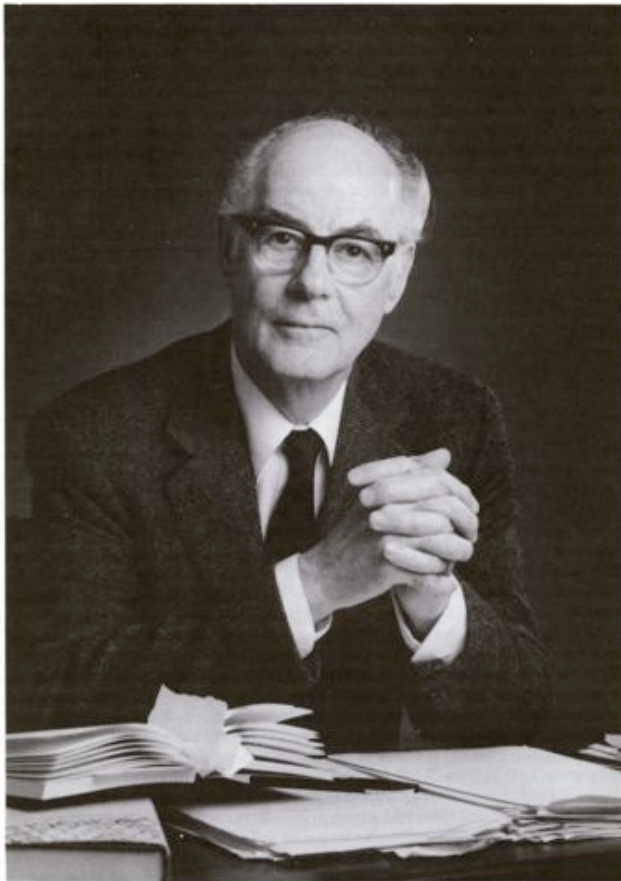




In Memory

Dr. William (Bill) Wellington 1920 – 2008

Dr. William (Bill) Wellington passed away peacefully on November 25, 2008, at the age of 88, in his birth city of Vancouver, British Columbia, Canada. Bill was a respected and honoured entomologist, zoologist



Schiffer Photography Ltd.

and biometerologist. He received his Bachelor's degree in Honours Zoology at the University of British Columbia during World War II. His interest in insects was sparked and mentored by U.B.C. Professor George J. Spencer, who instructed his students to explore the biology and behaviour of every organism they studied. After graduation, Bill joined the Canadian Meteorological Service, where he studied synoptic and dynamic meteorology to become, in 1942, a forecaster for navigational training schools of the Royal Canadian Air Force. During his tenure with the Met. Service, he spent hours in an upper-air calibration laboratory in Ontario, checking the accuracy of air-temperature gauges used on aircraft flying to Europe. On summer evenings, he was often the target of black flies (*Simuliidae*) and, as a retaliatory measure, released several of them into the calibration lab at conditions equivalent to 10,000 metres of altitude. The flies survived, and Bill's interest in insect responses to high-altitude conditions and transport in the upper atmosphere was piqued. His experiments led to a Master's degree and ten papers, including one in *Nature* and a series of four on conditions governing insect distribution in the free atmosphere, published in *The Canadian Entomologist*.

At the end of World War II, Bill left the Met. Service and, at the invitation of Professor Carl Atwood, began a doctorate in entomology



at the University of Toronto. Bill's doctoral work on the federal-provincial spruce budworm project at the Canada Agriculture Forest Insect Laboratory in Sault Ste. Marie led to a thesis on behaviour of spruce budworm larvae in response to meteorological variables and to a series of papers that included another in *Nature*, this one on temperature measurements in ecological entomology. During his tenure at Sault Ste. Marie, Bill generated new insights into the cascading influences of large- and small-scale weather phenomena on insect movement, behaviour and survival. He and colleagues Walt Henson and Ron Stark demonstrated that polar continental air could cause catastrophic winter mortality of lodgepole needle miner in the Rocky Mountains. Bill studied orientation and movement of insects in response to polarized light (published in *Nature*). He became known for his generous collaborative and mentoring spirit. Henson and Stark wrote that everyone who worked closely with him "experienced great and lasting changes in their habits of thought and methods of investigation", and that "his enthusiasm, his way of thinking, his open-mindedness, and his intellectual generosity always leave their mark" (Memoir of the Entomological Society of Canada #146).

Bill's career took him to Victoria, British Columbia, to lead the bioclimatological unit in forest biology from 1953 to 1968; to the University of Toronto, as professor of ecology, from 1968 to 1970; and back to the University of British Columbia from 1970 until 1988. At U.B.C., he was Director of the Institute of Resource Ecology from 1973 to 1979. Honours along the way included: Gold Medal for Outstanding Achievement in Canadian Entomology (E.S.C., 1968); Award for Outstanding Achievement in Biometeorology (American Meteorological Society, 1969); C.J. Woodworth Award for Outstanding Scientific Achievement (Entomological Society of America, 1979); Undergraduate Professor of the Year (Agriculture, U.B.C., 1978); Killam Senior Research Fellow (U.B.C., 1980); Professor Emeritus (U.B.C., 1986 -); and Fellowship in the E.S.C., the Explorer's Club and the Royal Society of Canada. He was especially proud of being in the Explorer's Club with all his boyhood heroes.

In 1988, Bill's colleagues and students honoured him with the publication of Memoir #146 (E.S.C.), "Paths from a Viewpoint: The Wellington Festschrift on Insect Ecology". The following are excerpts from that Memoir.

"I believe that the stature of Wellington in ecology will continue to grow for many years, as the real significance of [his] papers



becomes more widely appreciated and the work becomes incorporated in popular textbooks.” (Sir Richard Southwood)

“He turns old and tired problems into fresh intellectual challenges. I know of no one who so powerfully combines theory, deep knowledge and stunning revelations. His is a truly original mind.” (C.S. Holling)

Bill was a gifted illustrator. He used this gift to great effect in lectures, switching the chalk from his right hand, where it had been writing words, to his left, which he used for drawing.

Here are several tributes from former students and colleagues.

“Bill Wellington taught that chance favoured the mind prepared with the deepest powers of observation, that no detail was inconsequential or less beautiful, and that there were no liabilities that were not actually opportunities of great advantage ...” (C.D. Rollo)

“I remember Bill as a very kind, gentle man who, when he had an interesting point to make, did so with a wonderful subtle smile and twinkling eyes. And he did the same when someone else was making an interesting point. I remember when I gave a seminar on pattern, process, and scale in Bill’s graduate class on weather. It gave me a real boost to see my professor at the back of the room, grinning, and nodding, through the seminar! He really enjoyed the play of ideas.” (David A. Raworth)

“Bill Wellington was a very generous, compassionate and insightful human being, who encouraged me to enter the graduate program and study my favourite insect, the honey bee. In the summer of 1976, he actually invited me to carry out part of my field work in their magnificent garden on Adera St in Kerrisdale. The family took the presence of a beehive completely in their stride; since then, they have always made me feel welcome, for which I am deeply grateful. Of course, all of Bill’s students were blessed with a wonderful “mother hen” in disguise, who kept us all on track with various academic deadlines and away from any potential pitfalls.” (Daniela Bates (Cmiralova))

“Bill Wellington is perhaps best known in population circles for his work on the cyclic dynamics of tent caterpillars. His most cited paper, 84 times, is on maternal influences on tent caterpillar larvae (Canadian Entomologist 1965). Earlier papers on tent caterpillars that precede Citation Index are likely to have received even more citations. Bill’s contribution was to recognize that both the quality and quantity of caterpillars change over the population cycles. This behavioural



and physiological variation can strongly influence the impact that the environment has on insects and therefore, counting numbers is not sufficient for understanding population cycles. His strong message was to keep the insect in insect ecology.” (Judith Myers)

“Bill was probably my most important mentor. What a wonderful supportive supervisor he was - even when he gave you bad news, it felt positive. I was fortunate to stay in Vancouver and see Bill and Margret from time to time. He was always interested in my career, offering encouragement and unfailing confidence in my abilities. At the christening of our second daughter, Bill shared an analogy that he said could only be appreciated after the birth of a second child. Humans, he observed, had not evolved much beyond the salmon; they reproduced and then they died. With humans it just took longer. Besides enjoying this characteristic and distinctive wry humor, I could truly empathize with salmon at that point.” (Deborah Henderson)

Bill will be remembered by his wife Margret (nee Reiss), daughter Katherine (Roy) Lepik, son Stephen (Cheryl) Wellington, grandchildren Veronica and Matthew, brother-in-law Frank (Nell) Reiss, niece Jennifer (Peter) and their children Braeden, Evan and Joel as a loving husband, father, uncle and grandfather. He had a penchant for teaching through storytelling and annual pilgrimages to Banff during the summer. His legacy includes imparting a lasting appreciation for the power of the spoken and written word, the value of careful observation and attention to detail, an enjoyment of history, the importance of hugs, and the delight of Monty Python.

Obituary prepared by Katherine Lepik, Stephen Wellington, Margret Wellington and Sheila Fitzpatrick in February, 2009.

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ESBC Executive Contact Information

President	<p><i>Sheila Fitzpatrick</i> Agriculture and Agri-Food Canada, Agassiz Telephone: 604-796-1705 Email: fitzpatrick@agr.gc.ca</p>
President-elect	<p><i>Tom Lowery</i> Agriculture and Agri-Food Canada, Summerland Telephone: 250-404-3324 Email: loweryt@agr.gc.ca</p>
Past President	<p><i>John McLean</i> University of British Columbia, Faculty of Forestry, Vancouver Telephone: 604-822-3360 Email: John.Mclean@uB.C..ca</p>
Secretary / Treasurer	<p><i>Lorraine Maclauchlan</i> B.C. Ministry of Forests, Kamloops Telephone: 250-828-4179 Email: Lorraine.Maclauchlan@gov.B.C..ca</p>
Editorial Committee (Journal)	<p><i>Hugh Barclay</i> Canadian Forest Service, Victoria Telephone: 250-363-3338 E-mail: hbarclay@nrcan-rncan.gc.ca</p> <p><i>Lorraine Maclauchlan</i> B.C. Ministry of Forests, Kamloops, Telephone: 250-828-4179 Email: Lorraine.Maclauchlan@gov.B.C..ca</p> <p><i>Robert Cannings</i>, Royal British Columbia Museum, Victoria Email: RCannings@royalB.C.museum.B.C..ca</p> <p><i>Sheila Fitzpatrick</i> Agriculture and Agri-Foods Canada, Agassiz Telephone: 604-796-1705 Email: fitzpatrick@agr.gc.ca</p>
Boreus Editor	<p><i>Jennifer Heron</i> B.C. Ministry of Environment, Vancouver Telephone: 604-222-6759 Email: Jennifer.Heron@gov.B.C..ca</p>



Directors	<p><i>Alida Janmaat (1st)</i> Fraser Valley University, Abbotsford Telephone: 604-504-7441 Ext: 4350 E-mail: Alida.Janmaat@ufv.ca</p> <p><i>Leo Rankin (1st)</i> B.C. Ministry of Forests and Range, Williams Lake Telephone: 250 398-4352 Email: Leo.Rankin@gov.B.C..ca</p> <p><i>Dezene Huber (1st) University of Northern British Columbia, Prince George</i> Telephone: 250-960-5119 Email: huber@unB.C..ca</p> <p><i>Jim Corrigan (2nd)</i> B.C. Ministry of Forests, Vernon Telephone: 250 549-5696 Email: Jim.Corrigan@gov.B.C..ca</p> <p><i>Rob McGregor (2nd)</i> Douglas College Institute of Urban Ecology, New Westminister Telephone: (604) 527-5522 Email: mcgregorr@douglas.B.C..ca</p>
Student Representative	<p><i>Melanie Hart</i> Simon Fraser University, Biological Sciences, Burnaby Telephone: 604.291.5939 (lab), Email: mhart@sfu.ca</p>
Honorary Auditor	<p><i>John McLean</i> University of British Columbia, Faculty of Forestry, Vancouver Telephone: 604-822-3360 Email: John.Mclean@uB.C..ca</p>
Regional Director of National Society	<p><i>Bill Riel</i> Natural Resources Canada – Pacific Forestry Centre, Victoria Telephone: 250-363-6032 E-mail: briel@nrca-nrcan.gc.ca</p>
Webpage Editor	<p><i>Bill Riel</i> Natural Resources Canada – Pacific Forestry Centre, Victoria Telephone: 250-363-6032 E-mail: briel@nrca-nrcan.gc.ca</p>
Webpage	<p>http://www.sfu.ca/biology/ESBC/</p>



Western Elfin, *Callophrys iroides*, Denman Island May 2009.



Photographers in this issue

Last Name	First Name	Email Address (current at time of publishing)
Corrigan	Jim	Jim.Corrigan@gov.B.C..ca
Delury	Naomi	ndelury@shaw.ca
deWaard	Jeremy	Jeremy.Dewaard@gmail.com
Fitzpatrick	Sheila	fitzpatricks@agr.gc.ca
Grant	Paul	pbcgrant@hotmail.com
Heron	Jennifer	Jennifer.Heron@gov.B.C..ca (all photos not labeled with a credit except for those photographs that accompany the election profiles – credited to the candidate)
Kondla	Norbert	colias@shaw.ca
McGregor	Rob	mgregorr@douglas.B.C..ca
Ovaska	Kristiina	kovaska@shaw.ca
Strong	Ward	Ward.Strong@gov.B.C..ca
Vandenberg	Angie	angielv@telus.net
Wijdevon	Berry	Berry.Wijdevon@gov.B.C..ca



An unidentified plume moth (Pterophoridae). March 2009. Photo Jeremy deWaard.



A Garden Tiger (*Arctia cija*) on a light trap battery at Westham Island, Delta, August 2008. Photo Jeremy deWaard.