

Vol 35 (1) June 2015

Boreus



Newsletter of the Entomological Society of British Columbia



June 2015
Volume 35 (1)



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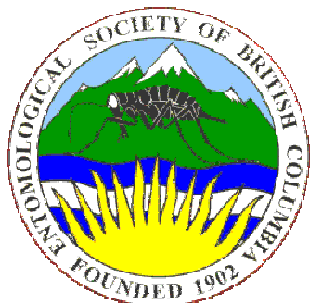


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Photo Credits: Norbert Kondla

The Executive



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

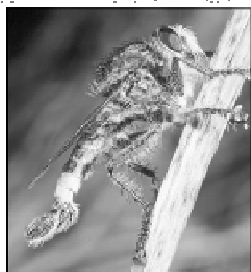
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Web Page Editor	Alex Chubaty Canadian Forest Service, Victoria



Publications of ESBC

Journal of the Entomological Society of British Columbia

Journal of the Entomological Society of British Columbia



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

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

The deadline for submissions to be included in the 2015 issue is 1 September, 2015. Please submit articles at the JESBC website: <http://journal.entsocbc.ca/>.

Boreus

Boreus



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

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

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

The deadline for submissions to be included in the June issue is June 1 and the December issue is December 1.



ESBC Website

Main Webpage: <http://entsocbc.ca>

Update your bookmarks, and save our new URL to your browser favourites. Our website provides all the information you need, in one place: ESBC announcements, meeting info, publications, contact information, and other useful links.

Facebook



Find us on
Facebook

Join us on Facebook:

<https://www.facebook.com/groups/13552445022/>

Keep in touch with students, colleagues, and friends! Stay up to date with the latest entomological happenings in BC, upcoming conferences, education and employment opportunities.

Twitter



@EntSocBC

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

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



Membership

Membership of the Entomological Society of B.C. is available to anyone interested in entomology. Annual dues are: Canadian resident \$20.00, International member \$25 or Student member \$10. 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, Ward Strong, E-mail: membership@entsocbc.ca

Cover Sketch: *Boreus elegans* (Mecoptera: Boreidae), one of the more conspicuous snow scorpionflies in B.C. Larvae and flightless adults live in, and feed on, moss and clubmoss. Adults appear in the fall and are active on snow on warm winter days. Cover sketch credit Ward Strong and Robert A. Cannings.

Cover Photographs:

Greater Night-stalking Tiger Beetle (<i>Omus dejeani</i>), taken on Denman Island, B.C. Photograph by Jennifer Heron.	Helliwell Provincial Park, May 2012. Photograph by Jennifer Heron
Photographs taken in the Peace Region, BC. Photographs by Jennifer Heron	



Spahats Creek, ESSF zone, Family Lycidae: *Dictyoapterus aurora*. Photo Credits: Lorraine Maclauchlan



ESBC Annual General Meeting and Symposium October 16 and 17, 2015

Annual General Meeting of the Entomological Society of British Columbia will be held on **October 16, 2015** in Kamloops. The ESBC Symposium: "Forest Entomology" will be held **October 17, 2015** in Kamloops. Location is the Henry Grube Educational Centre, 245 Kitchener Crescent, Kamloops. Mark it on your calendars.

President's Corner

Submitted by Steve Perlman

Hello fellow society members,

I hope you are having a wonderful summer. Our AGM on the Simon Fraser University campus last fall was a great success and yet now seems like a distant dream (it was great to connect with everyone there). Planning has already begun for our next meeting, which will be in Kamloops (October 16 and 17, 2015 – mark your calendars).

It has been a busy year. Mike Smirle's passing was a great shock and loss. I am very thankful and appreciative of our executive who work so hard for our society. Bill Riel hosted a very nice spring executive meeting this April (homemade pizza included!). Dezene Huber and Alex Chubaty have taken the lead on a number of important projects – completing the transition to making our journal fully digital, digitizing our archives, ushering in a beautiful *Checklist of the Lepidoptera of British Columbia* (coming soon!), and keeping our web and social media presence active and vibrant. Ward Strong has taken on the important job of treasurer. We also welcomed a few new members to our executive. Bob Lalonde and Brian van Hezewijk are our first and second vice-presidents, respectively. Joyce Leung is our new student director, and she has a number of great ideas to promote student engagement and enthusiasm (keep your eyes open for more on this soon!). Thanks to Riella Zilahi-Balogh for doing such a great job with Boreus, and to Tracy Hueppelheuser for holding things together as excellent society secretary. Thanks also to everyone who was involved in the important and ultimately successful discussion to fill the vacant Entomology curator position at the Royal British Columbia Museum. The process is now actively underway to find someone to fill Rob Cannings' giant shoes!

I hope you all have rejuvenating and productive summers. I am headed for some holidays and then back to the lab and my favourite insects (at the moment mushroom-feeding woodland *Drosophila* flies and southwestern *Liposcelis* psocid booklice are occupying my thoughts!) and their symbionts and parasites...

Steve Perlman



June 2015

female *Callophrys sheridanii*
1999-4-14 nr Kalamalka Lake, British Columbia



Photo credit: Norbert Kondla.



Graduate Student Representative Report

Prepared by Joyce Leung

Hi everyone!

I hope everyone is having a lovely summer and a successful field/lab season. This is my first year as part of the ESBC, and it has been fantastic getting to know the exciting work that our student and regular members get up to.

Fellow students get your calendars out and mark down these important dates!

ESBC AGM and Symposium

The AGM and Symposium this year will be held on **October 16th-17th** in Kamloops. The Symposium theme is “Forest Entomology”. Location is the Henry Grube Educational Centre 245 Kitchener Crescent, Kamloops. I look forward to seeing all our student members come together to present their work, and to celebrate their achievements thus far in their degree. Submission deadlines for papers and posters will be posted on the ESBC website <http://entsocbc.ca/>

Joint Annual Meeting of the Entomological Societies of Canada and Québec

The annual meeting of the Entomological society of Canada will be held jointly with the Entomological society of Québec in Montreal this year from November 8th to 11th. The theme for this year is Entomology in the Anthropocene. Deadline for papers and posters submissions is **August 31st**.

Graduate students are also invited to present at the Graduate Student Showcase, which is a great opportunity for graduate students that are near the completion of their degrees to share a more in depth overview of their work. Deadline for submission is **August 1st**.

If you think you may need financial assistance for getting to the meeting, keep a look out for details on the Ed Becker Conference travel Award on the SEQ-ESC meeting website.

Visit www.seq.qc.ca/activities/reunions/SEQ-ESC_2015 for more information.

Congratulations!

With another semester gone by, we see another batch of students walk up on stage to receive their degrees. On behalf of the ESBC Exec, we would like to congratulate:

Sharleen Balogh (UNBC) for defending her MSc thesis titled “Host location and selection of lodgepole pine (*Pinus contorta*) by the Warren root collar weevil *Hylobius warreni*”. Co-supervised by Staffan Lindgren and Dezene Huber.



Jennifer Scholefield (SFU) for defending her MPM thesis on “Baculovirus infection, host immunity and pathogen competition in the cabbage looper, *Trichoplusia ni*”. Supervised by Jenny Cory.

Catherine Scott (SFU) for defending her MSc thesis on “Web reduction behaviour and the chemical communication system of the western black widow, *Latrodectus hepserus*”. Supervised by Gerhard Gries.

It's been a long couple years for you, but you've made it! I wish you all the best for the future.

I hope to see you all in Kamloops in October!

Joyce - jpl15@sfu.ca



This sinister live female bot was photographed by Michelle Weisinger in Salmon Arm, BC on 20 July 2014. It was about 2 cm long and appears to be *Cuterebra tenebrosa* Coquillett, a parasite of wood rats and other small rodents. Can anyone tell us the function of the vertical winglets that show clearly at the rear of the thorax. Submitted by: Peter Belton belton@sfu.ca



Entomology Educational Opportunities in Canada

The Entomological Society of Canada published a Directory of **Entomological Education in Canada**. Available at:

http://www.esc-sec.ca/students/Directory_of_Entomology.pdf

Grad Student and Post Doc Opportunities

M.Sc.

The biology of mass extinctions: reconstructing insect life in the Paleocene

University of Regina/Royal Saskatchewan Museum

Application Deadline: 15 June 2015, or until suitable applicant found

To apply, please send a cover letter, CV and unofficial copies of academic transcripts to:

ryan.mckellar@gov.sk.ca

chris.somers@uregina.ca

For details see ESC website

Postdoctoral Research Associate (Entomology/Insect Ecology)

Montana State University

Contact Name: Dr. Gadi V.P. Reddy

Phone: (406) 278-7707

Location: Conrad, Montana, USA

Email: reddy@montana.edu

PhD Position in Ecology

Sogn & Fjordane University College and Rutgers University

Contact Name: Tarald Seldal

Location: Sogndal, Sogn og Fjordane, Norway

Email: tarald.seldal@hisf.no

Post-Doctoral Scholar in Entomology (May 2015)

University of California, Davis

Larry Godfrey

Phone: (530) 752-0473

Email: ldgodfrey@ucdavis.edu

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



DNA Barcoding Website:

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

Entomological Society of Canada

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

June 2015 Bulletin Vol 47 (2) (current issue) available online at <http://www.esc-sec.ca/bulletin.php>

THE JOINT ANNUAL MEETING OF THE ENTOMOLOGICAL SOCIETY OF CANADA AND THE ENTOMOLOGICAL SOCIETY OF QUEBEC “Entomology in the Anthropocene”

The Marriott Château Champlain, Montréal, Québec. Sunday 8 November – Wednesday 11 November 2015. The Submission deadline for Papers & Posters is **August 31st, 2015**. Early bird registration before 1 September. http://seq.qc.ca/activites/reunions/seq-esc_2015/call_for_papers.asp

Interesting Entomological Read

Jessica Stanhope, Scott Carver and Philip Weinstein. 2015. Environmental Research. 140: 619-633. “The Risky Business of Being an Entomologist: A Systematic Review”



Source: <http://ronyaroshauthor.com/category/entomology/>



Bulletin of Insectology **67** (1): 98, 2014
ISSN 1721-8861

BOOK REVIEW

What every entomologist ought to read

“The species seekers Heroes, fools and the mad pursuit of life on earth”

Conniff Richard, 2011. Norton & Co., New York-London, 464 pp.

This book is no less than a delightful and effective justification of our science, entomology. But it is much more: it is an enjoyable, well told, memorable summary of the birth of taxonomy and the discovery of the Earth's biodiversity. Scenes and stories are richly told, from Dejean, amateur entomologist and soldier, finding time to pick up a darkling beetle in the moment before an attack in the Spanish-French war (which proves to be a new species to science, *Cebrio ustulatus*), to the history how these discoveries formed and deepened our understanding of ourselves. The book starts out with the birth of the Linnean classification system, the subsequent outpouring of Linneaus “apostles” to various corners of the world, (several of whom died during their journey). In general the age of the amateur naturalists is sympathetically presented. The colourful, often bizarre personages of this exciting age and activity are presented in memorable detail, stories are told with verve and gusto - the pace never slacks and my interest never faded. A brief foray into the problem of how to preserve specimens is followed by the discussion of the shake-up of the human self-perception in the wake of the new discoveries of various animals, especially primates. Other important steps are delightfully told, including an interesting retelling of the Darwin-Wallace story of the discovery of natural selection. The rise of the professional scientist and the reason for the amateur-professional antagonism (hopefully overcome by today) is also plausibly discussed. Conniff has done his homework well. As far as I can judge, the facts pan out, the details are in good order, and overall, I trust the information written. And there are lots of new facts for me, even about entomology. Perhaps the plant world gets a little less attention than is due, but I am only griping because, being an entomologist, I would have liked to widen my horizons by this enjoyable writer. The book ends with the description how malaria, one of the historically most damaging diseases, its pathogenicity and mechanism of spread were discovered. This latter story is also fairly told, giving justice to scientists who have been unjustly sidelined, including Italian entomologist Grassi, so important in solving the malaria mystery. There are plenty of such stories when the reader feels that “justice has been done, at last”. The book closes with a “Necrology” - a list of scientists, with brief biographical notes, who died in search of new species. Every entomologist should read this book, then translate it into their language (I have already started) and give as many copies as possible as presents to their friends, relatives, and colleagues. There can hardly be a better device to convince them of the importance of natural history,



ecology and taxonomy. In Richard Coniff, we as well as all other taxonomists have a great champion and we all should be grateful for this fine and enjoyable book. I feel even naming a newly discovered species after him is deserved.

Gabor L. LÖVEI, Department of Agroecology, Aarhus University, Flakkebjerg Research Centre, 4200 Slagelse, Denmark. e-mail: Gabor.Lovei@agrsci.dk



Photo credit: Norbert Kondla



Some International Entomological Societies

Royal Entomological Society www.royensoc.co.uk/

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

Egyptian Entomological Society www.ees.eg.net/

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

Xerces Society for Invertebrate Conservation www.xerces.org

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

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

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

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

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

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

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

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

Entomological Meetings and Conferences

The Entomological Society of America compiles and maintains a list of entomology meetings and references. Below are some of these meetings, a full list is available at <http://www.entsoc.org/Periodicals/News/datebook>



2015

A Joint Meeting of the American Association of Veterinary Parasitologists, the Livestock Insect Workers Conference, and the International Symposium on Ectoparasites of Pets will be held July 11-14, 2015 at the Revere Hotel Boston Common in Boston, MA. Contact Dr Ray Kaplan at rkaplan@uga.edu.

The Joint Congress of the Entomological Society of Southern Africa and the Zoological Society of Southern Africa will be held, July 12-17, 2015 at Rhodes University, Grahamstown, South Africa.

The 15th International Meeting on Invertebrate Sound & Vibration will be held July 13-17, 2015 in Ottawa, Ontario, Canada. Contact: jyack@connect.carleton.ca or 613-235-3333.

The International Congress on Invertebrate Pathology and Microbial Control and the 48th Annual Meeting of the Society for Invertebrate Pathology will be held August 9-13, 2015 at the University of British Columbia Campus, Vancouver, British Columbia, Canada. Contact: SIP2015enquiries@gmail.com

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

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

The IOBC Working Group Meeting on Integrated Control in Protected Crops, Mediterranean Climate will take place October 11-15, 2015 at the Hebrew University, Rehovot, Israel. Contact: admin.iobcwg@mail.huji.ac.il

ESBCP-BIOCICON 2015, the joint international conference of Eco-friendly Applied Biological Control of Agricultural Pests and Phytopathogens (the Egyptian Society for Biological Control of Pests and the Crop Protection Research Centre, St. Xavier's College Palaynkottai, Tamil, Nadu, India) will be held October 20-23, 2015 in Cairo, Egypt. Contact Ahmed H. El-Heneidy, Cairo, Egypt at (esbcp2015@gmail.com / aelheneidy@gmail.com) and/or K. Sahayaraj, St. Xavier's College, Palayamkottai-627002, Tamil Nadu, India, (biocicon2015@gmail.com / ksraj48@gmail.com).

The Annual Meeting of the National Association of Landscape Professionals will be held October 21-23, 2015 in Louisville, KY. Contact Joan Haller at 800-395-2522 or events@landscapeprofessionals.org.

A Joint Annual Meeting of the Entomological Society of Canada and the Entomological Society of Quebec will be held November 8-11, 2015 in Montreal.

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

The Fifth Encuentro de Lepidoptera Neotropicales will be held November 16-20, 2015 in Tucuman, Argentina.



2016

The 13th Arbovirus Surveillance and Mosquito Control Workshop will be held March 29-31, 2016 in St. Augustine, FL. For more information, write to xueamcd@gmail.com.

The 11th International Symposium on Adjuvants for Agrochemicals will be held June 20-24, 2016 in Monterey, California.

The Entomological Society of Canada's Annual Meeting will be held September 23-30, 2016 in Orlando, Florida in conjunction with the 2016 International Congress of Entomology.

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



Cinara occidentalis (Davidson) and attending ants on Fraser fir.
Photo Credits: Susanna Acheampong



Supporting Butterfly Conservation through Collaboration: The BC Butterfly Atlas

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

Project Description

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

Project Objectives

The BC Butterfly Atlas has the following objectives:

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

Background

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

¹ <http://www.birdatlas.bc.ca>

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

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



Obituaries

Philip Arthur Jones (1 March 1924 – 8 January 2015)



Phil Jones, entomologist, naturalist, and long-time member of the Entomological Society of BC, was born in Prince George, BC on 1 March 1924. He died in Vernon, BC on 8 January 2015, two months short of his 91st birthday.

Although he spent his early years in Prince George, Phil moved to Smithers in 1937 and, after completing high school, and fascinated by the natural world, he enrolled in Agriculture in the winter session of 1942-43 at the University of British Columbia. World War II intervened, however, and, from 1944 to 1945, Phil served in the Royal Canadian Navy Volunteer Reserve-Signals Branch. Returning to UBC in 1946, he graduated in 1949 with a BSA, majoring in horticulture. During his undergraduate years, Phil spent the summers of 1947 and 1948 as a student assistant in forest entomology with the Canada Department of Agriculture in Vernon, BC and spent time at the Trinity Valley Field Station, a place guaranteed to turn any young naturalist into an entomologist. After graduation from UBC, Phil was promoted to Assistant Forest Biologist and continued to work in the Vernon office until September 1952.

Phil then left BC for the University of Wisconsin in Madison, where he earned his MSc in Entomology in 1956. His doctoral studies in forest entomology at Wisconsin were interrupted from July 1958 to July 1960, when he was hired as a Research Officer with the Canada Department of Agriculture, Forest Entomology, in Ottawa. He returned to the University of Wisconsin in 1960 to study biological control of forest insect pests and, in 1963 he received his PhD in Entomology with a minor in Plant Ecology.

In 1964 Phil accepted a position as Assistant Professor in the Entomology-Zoology Department at South Dakota State University in Brookings. He combined his duties as State Survey Entomologist with field research projects on the control of agricultural insect pests in small grain, row and forage crops throughout South Dakota. He edited, and contributed to, the weekly South Dakota Insect Survey Newsletter, which was distributed to extension workers, growers and producers in South Dakota and adjoining



states. He also provided South Dakota information to US Department of Agriculture surveys of insects of economic importance in the north-central states.

Phil moved to Burlington, Ontario in 1974 as Technical Director for Niagara Chemicals and, in 1977, he joined the Environmental Protection Service (Commercial Chemicals Branch), Environment Canada, in Ottawa as a Senior Scientist. His first assignment was a major technical review of chlorophenols in the environment. Other environmental reviews followed, including those for the commercial chemicals derived from organotins and chlorobenzenes. Phil transferred to the Vancouver office of the Environmental Protection Service in June 1992 as a Senior Pest Management Specialist. He retired to Vernon in November 1993, returning to the Okanagan Valley that he fell in love with 45 years earlier as a young university student.

Throughout his long career Phil was an author of many academic papers and publications in forest and agricultural entomology. But he was interested in many things, from history (a recent project was the documentation of the history of the Bulkley Valley, where he spent part of his youth) to photography, from skiing to nature education. What I saw mostly, though, in my friendship with Phil, was a love of natural history and a deep interest in people. He frequently phoned me at the Royal BC Museum for information, or sent me specimens and insect photos for confirmation of identification. Often these requests were passed along from friends or other Vernon naturalists; Phil was a great facilitator. During his first years as a professional entomologist, Phil was one of the people connected to the Forest Insect Laboratory in Vernon who, in 1951, formed the North Okanagan Naturalists' Club. He served as its first secretary-treasurer in 1951-1952. This organization became a popular and powerful force in BC nature study and conservation and, in May 2014, for his significant contributions, Phil was elected a life member.

Rob Cannings
Curator Emeritus of Entomology
Royal BC Museum
May 2015



Alfred (Fred) Thomas Shrawley Wilkinson (July 8, 1923 - April 11, 2015)



Fred (Fudge) was born and raised in Grand Forks, B.C. Following a stint at the Trail smelter, he trained as a pilot in the RCAF and was posted to the Thunderbird RCAF 426 Squadron where he flew Halifaxes for 16 missions. After the war, he graduated from UBC and became an Entomologist with Agriculture Canada in Vancouver where he worked for 39 years. Fred enjoyed hunting, fishing, travelling, lawn bowling, bridge, Legion 142 and the annual family camp out. Most of all Fred loved people. With his humor, warmth and ability to make everyone feel special, he made many friends. Fred was predeceased by his father and mother Tom and Kitty Wilkinson, his brother Jock Wilkinson, and sister Ruby Pease. He will be deeply missed by Jean (nee Knowles), his wife of 64 years, children Gwen (Chris), Tom (Catherine), and Vicki (Mark), grandchildren Dawn (Jordan), Scott (Tracy), Sean (Kirah), Carly (Steve), Caitlin (Thomas), Libbie and Sam, great-grandchildren Stella, Carson, Carter and Savanna, and many nieces, nephews and friends. His initial work comprised the study of the biology, distribution, and control of wireworms in British Columbia. Further research of the control - primarily insecticidal - of the carrot rust fly and other root maggots, added to his contribution to economic entomology. Fred's interest in biological control placed him in a favourable position to incept and conduct studies in the control of weeds (bull thistle, tansey ragwort, Canada thistle) using specific insects (Cinnabar moth and weevils). He has also had considerable success in his investigations of the population dynamics, distribution, damage potential and control - chemical and biological - of crane flies. Fred has published more than 20 technical papers, many popular articles and has made a significant contribution to our knowledge of economic entomology in B.C.

Published in part in Vancouver Sun and/or The Province from Apr. 17 to Apr. 18, 2015



Executive Contact Information

<i>President</i>	Steve Perlman president@entsocbc.ca
<i>Secretary</i>	Tracy Hueppelsheuser secretary@entsocbc.ca
<i>Treasurer and Memberships</i>	Ward Strong treasurer@entsocbc.ca
<i>Editor, Journal of the Entomological Society of BC</i>	Dezene Huber journal@entsocbc.ca
<i>Boreus Newsletter Editor</i>	Gabriella Zilahi-Balogh boreus@entsocbc.ca
<i>Web Page Editor</i>	Alex Chubaty webmaster@entsocbc.ca



Pitfall trapping. Photo credits: Joyce Leung