

BOREUS

Newsletter of the
Entomological Society
of British Columbia

Volume 18 (1) June 1998

ENTOMOLOGICAL SOCIETY OF BRITISH COLUMBIA

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

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Publications of the ESBC

Journal of the Entomological Society of British Columbia

The Journal of the Entomological Society of BC 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 have 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 should be sent to the Editor, Dr Dave Raworth, Agriculture and Agri-Food Canada, Pacific Agri-Food Research Centre, PO Box 1000, Agassiz, BC, V0M 1A0, Canada; tel 604-796-2221; fax 604-796-0359; e-mail raworthd@em.agr.ca. The deadline for submissions to be included in the 1998 issue is September 1, 1998.

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 emphasising the Society's affairs, Boreus provides members with a forum for their views and news of British Columbian entomology. Please send correspondence concerning Boreus to the Editor, Troy Danyk, Agriculture and Agri-Food Canada, Lethbridge Research Centre, PO Box 3000, Lethbridge, AB, T1J 4B1, Canada; tel 403-327-4591, extension 462; fax 403-382-3156; e-mail danyk@em.agr.ca. The deadline for submissions to be included in the December 1998 issue is to be established.

Membership of the Entomological Society of BC is available to anyone interested in entomology. Annual dues are Can\$20 (regular member) or Can\$10 (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 Robb Bennett, BC Ministry of Forests, 7380 Puckle Road, Saanichton, BC, V8M 1W4, Canada; tel 250-652-6593; fax 250-652-4204; e-mail Robb.Bennett@gov.bc.ca.

Cover: *Boreus elegans* (Mecoptera: Boreidae); one of the more conspicuous snow scorpionflies in BC. 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.

BOREUS

NEWSLETTER OF THE ENTOMOLOGICAL SOCIETY OF BRITISH COLUMBIA

Volume 18, Number 1 June 1998

SOCIETY BUSINESS

1998 Annual General Meeting announcement and call for papers	1
ESBC Education Grants a success	1
E-Boreus	1
Editor calls it quits	1

OBITUARY

Brian Beirne	2
--------------------	---

FEATURES

Victoria Bug Zoo	3
------------------------	---

INTERNET NEWS

Some useful URLs	3
------------------------	---

FREE PUBLICATIONS	4
-------------------------	---

ENTOMOPHILIA	6
--------------------	---

Late December issue: I regret that members received the December 1997 issue of Boreus late. The intention was to mail Boreus along with the Journal of the ESBC some time in December or early January. However, printing of the Journal was delayed, which precluded mailing of Boreus.

-- Editor

SOCIETY BUSINESS

1998 Annual General Meeting announcement and call for papers The 1998 Annual General Meeting of the ESBC will be held at the Pacific Forestry Centre (506 West Burnside Road, Victoria, BC) on Friday October 9, 1998. Registration will open at 8:00 AM and will cost \$20 and \$10 for Regular and Student Members, respectively.

To ensure the success of this meeting, please plan to attend, and consider presenting a paper. To include your paper in the Scientific Program, please send to the address below the title and name(s) of author(s). Please indicate if your paper is to be judged in the Student Paper Competition. Deadline for submissions is August 31, 1998.

Terry Shore

Canadian Forest Service, Pacific Forestry Centre, 506 West Burnside Rd., Victoria, BC, V8Z 1M5; tel 250-363-0666; fax 250-363-0775; e-mail tshore@pfc.forestry.ca

ESBC Education Grants a success

In 1998, the ESBC offered grants to BC grade schools for entomologically-related projects. The grants were last offered in 1995, and were a big success. This year, we allotted \$600 of our own money, which was matched with a further \$600 grant from the Public Education Committee of the Entomological Society of Canada, totalling \$1,200 in funds.

We received 92 applications, and awarded 14 grants. I was the sole judge in the competition; my criteria were probably esoteric, biased and trivial, but all the decisions were unanimous and no provisions were made for appeals, facilitating a quick conclusion to the process. The award winners were:

Bert Ambrose Elementary Sch., Fort St. John, \$92.95;
Centennial School, Coquitlam, \$153.75;
F.A. Tomsett Elementary School, Richmond, \$89.79;
Harrison Hot Springs Elementary School, \$150.00;
John Stubbs Memorial School, Victoria, \$30.00;
Lonsdale Elementary School, N. Vancouver, \$76.85;
Miracle Beach Elementary Sch., Black Creek, \$84.74;
Nestor Elementary School, Coquitlam, \$137.85;
Pleasant Valley Secondary Sch., Armstrong, \$131.50;
Reynolds Secondary School, Victoria, \$35.00;
Ruskin Elementary School, Maple Ridge, \$35.00;
Sir Alexander Mackenzie School, Vancouver, \$108.66;
Valemount Elementary School, Valemount, \$48.46;
Wasa Elementary School, Wasa, \$50.00.
TOTAL=\$1,224.55

Notification letters were sent out on March 6, 1998. Award recipients have mostly written letters of thanks, and so far, no complaints have surfaced from the losers. I requested that each recipient write a project report and send it to me on completion of their projects. These can be placed on display at the ESBC AGM this fall, or interested parties can visit or contact me to view them.

The number of responses, and the sounds of desperation from some applicants, made me wish we had much more money to give away. I really regretted turning down the 78 unsuccessful applicants. This process served to underscore the need for, and appreciation of, such activities by the ESBC. I strongly encourage continuing and adding to programs such as this. It is gratifying to be able to take an active role in fostering the development of entomological interest in young minds around the province.

Ward Strong

E-Boreus

Members are reminded that Boreus is published on the home page of the Society (www.harbour.com/commorgs/ESBC/index.html). If you are interested in accessing Boreus on the home page only, and do not want a hard copy of the newsletter, please contact the ESBC Secretary/Treasurer,

Robb Bennett, and he will remove your name from the Boreus mailing list. Note that you will still receive your copy of the Journal if your name is deleted from the Boreus mailing list.

Editor calls it quits

I plan to resign as Editor of Boreus, my term ending at the 1998 Annual General Meeting. It's been fun and educational, but it's time for someone else to take the reins and put their own skew on our beloved newsletter. A successor needs to be selected, so if there are interested Members, please contact the Secretary/ Treasurer, Robb Bennett. The Editors's position is an elected one that is ratified by the Membership. In the mean time, please submit to me items for publication. Mmm, b'bye.

OBITUARY

Bryan Beirne

Dr Bryan Beirne, an internationally known pioneer in the field of pest management, died on March 28, 1998 at home. He is survived by his son, Patrick, and daughter, Anne, and their families.

Beirne was born in Ireland in 1918. He entered Trinity College in Dublin at 16 years of age. The College lacked an entomology pro-gram and when he received his PhD in 1940, he was one of the few wholly self-taught professional entomologists.

Beirne was appointed Lecturer in Entomology at the College, and was one of two fulltime teaching staff of the Department of Zoology during the 1940's. In addition, he worked in the then University Museum of Zoology and Comparative Anatomy. To supplement his salary, Beirne established and operated a commercial pest control business.

In 1949, Beirne was appointed to the Canada Department of Agriculture in Ottawa, to work on the systematics of leafhoppers, plant bugs, and their relatives. Beirne was promoted in 1955 to Director of what would become the Research Institute for Biological Control in Belleville, Ontario.

Beirne was a proponent of integrated strategies for the management of pests. He proposed that the Institute move to a university campus where its speciality could be related to other aspects of pest management and where its specialists could train graduate students. Those proposals were rejected, and in 1967 he and seven colleagues resigned and joined the faculty of Simon Fraser University (SFU) to organize the world's first structured professional program leading to the degree of Master in Pest Management (MPM).

Beirne served as the Centre's first Director, and his research program centred on the principles and practice of biological control and pest management and, with graduate students, on the bionomics of individual pest species. In 1979, he was appointed Dean of Graduate Studies at SFU. Upon retirement in 1983, he was appointed Professor Emeritus of Pest Management with continuing special interests in encouraging inter-disciplinary and applied programs. In addition, he was involved in development of innovative business enterprises in the areas of electronic communications and non-chemical controls.

Beirne's career brought him significant honours. He served on a number of academic, editorial, government, national, and international committees, and was an invited lecturer or consultant in some 20 countries. He published 15 books or monographs, and more than 120 technical research papers, and numerous smaller publications and reports. Honours include Member of the Royal Irish Academy, Gold Medalist and Fellow of the Entomological Society of Canada, Chairman's Award for Career Achievement Award from the Science Council of BC, Fellow of the Society for British Entomology, and Honorary Member of various societies and associations concerned with entomology or pests. Named after him is the insect Genus, *Beirneola*, and a number of species of insects and a species of fungus, all *beirnei*, a section of a university library (at Ataturk, Turkey), and the BP Beirne Prize in Pest Management (at SFU).

A reception was held on April 9, 1998 at SFU's Diamond Club in honour of Beirne. It was a happy affair and the eight invited speakers told anecdotes (most of them funny) about their connections with Beirne. The speakers were Patrick Beirne; Mike Smith, Chair of the Department of Biological Sciences at SFU, who first met Beirne when he was a student in 1983; Jack Blaney, President of SFU; Peter Belton, Adjunct Professor at SFU, who talked about the Belleville days; Bill Saywell, Past-President of SFU; Zamir Punja, Director of the Centre for Pest Management, who spoke about the Centre which Beirne founded and about the 25th Anniversary celebration of the Centre; Carole Conlin, Departmental Assistant in the Department, who related some stories about her time as Beirne's secretary; and John Borden, Professor in the Department, who was one of the founders of the BP Beirne Prize.

The BP Beirne Prize was established more than ten years ago in honour of Beirne. It is an annual prize, currently valued at \$1,000, and is awarded to an outstanding graduate from the Master of Pest Management program. For information about donating to the BP Beirne Prize in Pest Management, contact: Development Office, BP Beirne Prize in Pest Management, Simon Fraser University, 8888 Barnet Highway, Burnaby, BC, V5A 1S6.

[Anon.; Peter and Elspeth Belton; Carole Conlin; SF News 11(7); Mike Smith]

FEATURES

Carol Maier

The latest zoo to open in Victoria is home to several thousand animals, but not one of them has a back bone, a tooth or a nose. The Victoria Bug Zoo opened its doors in October 1997 and hasn't looked back. The Zoo features arthropods from around the world and visitors can expect to see a leafcutter ant colony from Trinidad, orchid mantids from Malaysia, Mexican tarantulas, and fluorescing desert scorpions, to name just a few. In fact, there are about 30 species on display in the gallery at any one time, and exhibits change regularly so visitors can come again and again to see what's new at the Zoo. The Zoo's mandate is to provide the general public with a safe, fun and educational place to experience the world of insects, spiders, and other (mostly) terrestrial arthropods. To ensure a memorable experience, an entomologist, such as Carol Maier (owner), provides one-on-one time with the visitors and allows various animals to be handled, such as the giant African millipedes, hissing roaches and bizarre stick insects. Kids are thrilled with the hands-on experiences and adults are intrigued. Some visitors experience a complete change in attitude toward "creepy crawlies" and others are thrilled to have the opportunity to be a kid again-- to go back to a time in their childhood when they could just marvel at the little insects and spiders in their backyard.

The Zoo has a gift shop where all kinds of great bug-related items can be found. The shopper will discover unique and educational toys, games, clothing and bug-candy. There is a huge selection of books on insects and spiders, and a variety of unusual items with a bug motif. Beekeepers and honey lovers will find unique novelty items and delicious honeys from across Canada. Currently, the Zoo features 14 different kinds of Canadian honeys, including, the ever popular, Buckwheat from Manitoba. We continue to expand our selection of specialty honeys from renowned sources around the world, including Manuka from New Zealand.

The Bug Zoo is the first hands-on facility in Canada; it is 100% privately owned and 100% privately funded. Nearly a year of planning went into the development of the business strategy and in finding a suitable location with the proper municipal zoning (we now have a great landlord!). The Zoo employs three full-time staff and three part-time assistants, and is located along the gorgeous waterfront of Victoria's inner harbour, at 1107 Wharf Street. FMI, call 250-384-2847 or e-mail cmaier@bugzoo.bc.ca.

INTERNET NEWS

Some useful URLs

Hawaiian arthropod bibliography:
www.bishop.hawaii.org/bishop/HBS/hibib/arthbib.html

International Federation of Butterfly Enthusiasts:
www.IFBE.org

Clemson entomology department:
entweb.clemson.edu/

USDA whitefly knowledgebase:
www.ifas.ufl.edu/~ent2/wfly/

Medical entomology:
www-personal.usyd.edu.au/~sdoccett/medical_entomology.htm

Head lice Power Point presentation:
www.ifas.ufl.edu/~schoolipm/

Massachusetts crop IPM:
www.nysaes.cornell.edu/ipmnet/ma/g11.html

Information on termites:
www.utoronto.ca/forest/termite/termite.htm

Chalcidoidea site:
res.agr.ca/ecorc/apss/apsshome.htm

Global contact directory for pest management:
www.pestmanagement.co.uk/contact.html

St. Urho entomology page:
www.uwstout.edu/biology/sturho.htm

Florida Mosquito Control Association:
www.famu.edu/mls/fmca.htm

The centipede page:
www.ilinkusa.net/~100legs/

The tarantula gallery:
chekware.simplenet.com/burrow/gallery/tarantulas/

Beekeeping:
www.ifas.ufl.edu/~mts/apishtm/apis.htm

Bugcloset:
pegasus.cc.ucf.edu/~biology/bugs

Pet arthropod page:
www.key-net.net/users/swb/index.html

On-line text translation program:
babelfish.altavista.digital.com/cgi-bin/translate?

Taxonomy:

biodiversity.uno.edu/delta/

Hymenoptera database:

iris.biosci.ohio-state.edu/hymenoptera

Entomology:

gnv.ifas.ufl.edu/~pence/pence.html

Introduction to entomology:

www.ex.ac.uk/~gjlramel/welcome.html

Integrated Taxonomic Information System:

www.itis.usda.gov/itis/

IPM in schools:

www.ifas.ufl.edu/~schoolipm/

Arthropods affecting human and animal health:

res.agr.ca/ecorc/apss/apsshhome.htm

IPMnet expertise database:

www.IPMnet.org

"Butterfly" in over 70 languages:

gnv.ifas.ufl.edu/~pence/pence.html

Seventeen statistical computer programs:

nhsbig.inhs.uiuc.edu/www/chi.html

Young Entomologists' Society:

insects.ummz.lsa.umich.edu/yes/yes.html

Minibeast World of Insects and Spiders:

members.aol.com/YESedu/welcome.html

Dragonfly for Michigan State Insect:

members.aol.com/YESnetwk/index.html

FREE PUBLICATIONS

Private Costs and Benefits of Pesticide Minimisation, Part A, 1997

This 85-page book examines mitigation of pesticide risks in UK, opportunities for reducing pesticide use, improvement in targeting of pesticide use, and actions to protect environment. Stresses risk- reduction rather than pesticide-reduction. Presents crop-specific cost estimates for pesticide risk minimization techniques, and describes costs and benefits. Contact: Mrs M. Chatterjee, DETR, Environment Protection Economics Division, Zone 5/F5, Ashdown House, 123 Victoria St., London SW1E 6DE, UK; tel 44-171-890-6445; fax 44-171-890-6419.

Private Costs and Benefits of Pesticide Minimisation, Part B, 1997

Reviews pesticide minimization techniques used in UK for several crops, including winter wheat, spring barley, oilseed rape, sugar beet, potatoes and orchards. Outlines specific methods, such as crop rotations,

planting resistant cultivars, using organic mulches and adjusting pesticide application technologies. Summarizes benefits and costs, and assesses extent of adoption. Contact: same as above.

Catalog of Insect Monitoring Systems for the Professional Grower Insect Monitoring Systems

This 30-page booklet has traps, kits, attractants, and other related equipment. Contact: Great Lakes IPM Inc., 10220 Church Road, NE, Vestaburg, MI, 48891; e-mail glipm@nethawk.com; fax 517-268-5311.

Pesticide Data Program: Annual Summary Calendar Year 1996

This 1998, 35-page book summarizes pesticide residue monitoring programs at US federal level, and provides data of pesticides detected in samples taken in 1996. Contact: Dr Robert Epstein, Associate Deputy Administrator for Science and Technology, Agricultural Marketing Service, USDA, PO Box 96456, Room 3522-S, Stop Code 0222, Washington, DC 20090-6478; tel 703-330-2300; fax 703-369-0678; URL www.ams.usda.gov/science/pdp/index.html.

Global Status of Transgenic Crops in 1997

This 30-page, 1997 book provides brief history of biotechnology and commercialization of transgenic crops worldwide. Outlines where which transgenic crops are grown, and presents data about acreage and dollar value. Free only to residents of developing countries. Contact: International Service for the Acquisition of Agri-biotech Applications (ISAAA), 260 Emerson Hall, Cornell University, Ithaca, NY, 14853; e-mail isaaa@cornell.edu; URL www.isaaa.cornell.edu.

Status of Chemicals in Special Review, 1998

The 54-page book (document EPA-738-R-98-001) describes the special review process, and lists chemicals that are or have been in Special Review. Presents information about current status of chemicals in Special Review, including what key studies have shown and what key studies need to be completed. Contact: EPA/NCEPI, PO Box 42419, Cincinnati, OH 45242-2419; tel 800-490-9198; fax 513-489-8695; URL www.epa.gov/oppt.

Office of Pesticide Programs (OPP) Annual Report for FY 1997

A 41-page, 1998 book that outlines implementation of Food Quality Protection Act and other programs. Discusses reorganization of OPP, field activities and international activities, work with Intergovernmental Forum on Chemical Safety (IFCS), Codex Alimentarius and the North American Commission on Environmental Cooperation. Provides basic pesticide use data. Contact: EPA, Office of Pesticide Programs (OPP)/FEAD/OPP, Mail Stop 7506C-CB, 401 M St, SW, Washington, DC, 20460; fax 703-305-5558; URL www.epa.gov/opp.

Food, Nutrition and Agriculture: From Famine to Food Security

Trimesterly periodical on food security topics, book reviews and news about food security developments worldwide. Contact: Technical Editor, Food and Nutrition Division, FAO, Viale delle Terme di Caracalla, 00100, Rome, Italy; fax 39-6-5705-3152; e-mail fna@fao.org; URL www.fao.org/waicent/faoinfo/economic/esn/nutri.htm.

The World Food Situation: Recent Developments, Emerging Issues and Long-term Prospects

This 36-page, 1997 book outlines growing "food gap" between haves and have-nots worldwide and predicts increasing price fluctuations in world food market. Discusses funding policies and programs that promote broad-based economic growth, particularly aimed at improving productivity of small farmers. Contact: International Food Policy Research Institute (IFPRI), 1200 Seventeenth St, NW, Washington, DC, 20036-3006; tel 202-862-5600; fax 202-467-4439; e-mail ifpri@cgnnet.com; URL www.cgiar.org/ifpri.

Integrated Pest Management-- The Way Forward for the Global Crop Protection Industry

This 22-page pamphlet describes principles and application of IPM. Contact: Communications, GCPF, 143 Avenue Louise, B-1050 Brussels, Belgium; e-mail gcpf@pophost.eunet.be; fax 32-2-542-0419; URL www.gcpf.org.

US EPA Harmonized Test Guidelines

The US EPA has published a number of test guidelines for the assessment of pesticides and toxic substances. Contact: US Government Printing Office, Washington, DC 20402; tel 202-512-0132; URL www.epa.gov/epahome/research.htm, under the heading "Researchers and Scientists/Test Methods and Guidelines/Harmonized Test Guidelines".

ENTOMOPHILIA

Meetings

1998

Jul 13-Aug 7. *5th Annual IIBC International Training Course: Biological Control of Arthropod Pests & Weeds.* Silwood Park, UK. Info: S. Williamson, Training & Information Officer, IIBC, Silwood Park, Buckhurst Road, Ascot, Berks. SL5 7TA, UK; e-mail s.williamson@CABI.org; 44-1344-875007; tel 44-1344-872999.

Aug 2-7. *9th IUPAC International Congress: Pesticide Chemistry.* London, UK. Info: J.F. Gibson, Royal Soc. of Chemistry, Burlington House, London W1V 0BN, UK. Fax 44-171-734-1227; tel 44-171-437-8656.

Aug 17-21. *5th International Symposium on Adjuvants for Agrochemicals.* Memphis, TN. Info: A. Underwood, FISAA, c/o Helena Chem. Co., 6075 Poplar Ave., Suite 500, Memphis, TN, 38119; fax 901-761-2640; tel 901-537-7260.

Aug 10-15. *6th International Mycological Congress.* Jerusalem, Isreal. Info: Secretariat, PO Box 50006, Tel Aviv 61500, Isreal; e-mail mycol@kenes.ccmil.com; fax 972-3-5175674; tel 972-3-5140014; URL lsb380.plbio.lsu.edu/ima/index.html.

Aug 23-28. *7th International Colloquium on Invertebrate Pathology and Microbial Control.* Sapporo, Japan. Info: Hokkaido University, tel 81-11-706-2423; fax 81-11-747-9780.

Aug 24-28. *3rd International Forest Vegetation Management Conference.* Info: IFVMC #3, Bio-Forest Technologies Inc., 105 Bruce Street, Sault Ste. Marie, ON, P6A 2X6; e-mail ifvmc3@nrca.gc.ca; fax 705-942-8829; tel 705-942-5824.

Sep 21-24. *Scents in orchards, IOBC-WPRS meetings.* Munich, Germany. Info: P. Witzgall, SLU, Box 44, SE-230 53, Alnarp, Sweden; e-mail peter.witzgall@vsv.slu.se.

Oct 20-23. *22nd North American Plant Protection Organization Meeting.* Halifax, NS. Info: R. Bast; e-mail rbast@em.agr.ca; fax 613-228-6606; tel 613-225-2342.

**** Oct 9.** *96th AGM of the ESBC.* Victoria, BC. Info: Terry Shore, Canadian Forest Service, Pacific Forestry Centre, 506 West Burnside Rd., Victoria, BC, V8Z 1M5; tel 250-363-0666; fax 250-363-0775; e-mail tshore@pfc.forestry.ca

Oct 31-Nov 4. *Joint Annual Meeting of the Entomological Societies of Canada and Québec.* Québec, PQ. Info: Johanne Delisle; e-mail jdelisle@cfl.forestry.ca; URL ecoroute.uqcn.qc.ca/group/seq/seq3.htm or www.biology.ualberta.ca/esc.hp/homepage.htm.

Nov 8-12. *American Phytopathological Society and Entomological Society of America Joint Meeting.* Las Vegas, NV. Info: C.S. Dacus, APS, 3340 Pilot Knob Rd., St. Paul, MN, 55121-2097; fax 612-454-0766; tel 612-454-7250; e-mail corie@scisoc.org.

Nov 9-12. *Brighton Crop Protection Conference 1998, Pests & Diseases.* Brighton, UK. Info: The Event Organization, 8 Cotswold Mews, Battersea Square, London SW11 3RA, UK; e-mail eventorg@event-org.

com; fax 44-0-171-924-1790; tel 44-0-171-228-8034; URL www.BCPC.org.

1999

Mar 8-10. *Emerging Technologies in IPM: Concepts, Research, Implementation*. Raleigh, NC. Info: T.B. Sutton, Dept. of Plant Pathology, North Carolina State Univ., Raleigh, NC, 27695; e-mail tsutton@ppent1.ppath.ncsu.edu; fax 919-515-8795; tel 919-515-6823.

Mar 28-Jul 10. *International Course in IPM: Strategies to Control Diseases and Insect Pests*. Wageningen, Netherlands Info: H.A.I. Stoetzer, IPM Course Coordinator, IAC, PO Box 88, 6700 AB Wageningen, Netherlands; e-mail h.a.i.stoetzer@iac.agro.nl; tel 31-317-490353; fax 31-317-418552; URL www.iac-agro.nl.

May 19-21. *World Neem Conference (and Tradeshow)*. Vancouver, BC. Info: M.B. Isman, Department of Plant Science, University of British Columbia, Vancouver, BC, V6T 1Z4; e-mail isman@unixg.ubc.ca; fax 604- 822-8640.

Jul 25-30. *14th International Congress on Plant Protection*. Jerusalem, Isreal. Info: S. Barnett, Congress Coordinator, PO Box 50006, Tel Aviv 61500, Isreal; e-mail IPPC@kenes.com; fax 972-3-514-0077; tel 972-3-514-0014.

Aug 29-Sep 3. *7th International Conference on Juvenile Hormones*. Jerusalem, Isreal. Info: S.W. Applebaum; e-mail jhvii@indycc1.agri.huji.ac.il; URL www.agri.huji.ac.il/~jhii.

The Butterflies of Canada

"The Butterflies of Canada", authored by Ross Layberry, Peter Hall and Don Lafontaine, was launched on April 21, 1998, at a reception at the Canadian Museum of Nature in Ottawa, ON. About 300 people attended the launch, and enjoyed talks by the authors. FMI: Peter Hall, 613-759-7779, hallp@em.agr.ca. [RBIS]

Flightless parasitoid

A recent mutant flightless form of the parasitoid of the cotton bollworm has been found in Missouri. It is more effective than the normal parasitoid as it cannot escape from the release area. The first generation is built up on a trap crop of geraniums near the cotton. Future plans are being made to isolate the gene responsible for flightlessness, so it can be used in biological control. [Agr. Res. 41(6)]

Novartis to terminate production of OPs

Novartis announced that it plans to reduce its line of insecticides from 26 to 11 active ingredients, ending the company's production of several older organophosphate pesticides, that include dichlorvos, disulfoton, formothion, isazofos, monocrotophos and phosphamidon. Novartis, which was established in 1996 from the merger of Ciba Geigy and Sandoz, believes its future marketing prospects for these products is limited, partly owing to market share erosion by generic brands and because some countries have imposed bans or restrictions on their use. A schedule for terminating production of the OPs has not been released, but Novartis said the process has begun and will be carried out on a country by country basis depending on local marketing/regulatory conditions. [PANNA]

New guidelines released

The Pest Management Regulatory Agency released a document entitled, Guidelines for the Registration of Microbial Pest Control Agents and Products on January 30, 1998. The document outlines the requirements for registration of microbial pest control agents and products proposed for pest management in Canada. This 130 page document may be available from the PMRA Publications Coordinator, Health Canada, 2250 Riverside Drive AL6606D1, Ottawa, ON, K1A 0K9; tel 800-267-6315.

Federal biotechnology consultations underway

In March 1998, Agriculture and Agri-Food Canada and the Canadian Food Inspection Agency held one day workshops in Saskatoon and Toronto to discuss with industry and provincial representatives the priorities and needs for agricultural biotechnology in light of the renewal of the Canadian Biotechnology Strategy (CBS). About 75 organizations were represent at the two meetings and discussions focussed on several key areas including: meeting public needs, market access and strengthening industry. Detailed discussions also took place regarding the need to ensure safe, effective use of biotechnology and how to ensure Canadian and international consumers were aware of, and comfortable with, the safety and efficacy of products produced using this technology. The results of these sectoral consultations (workshops and written submissions) will be forwarded to the Canadian Biotechnology Task Force, which is responsible for the overall renewal of the CBS. Consultation activities, documents, schedules and results are being posted on the Industry Canada URL, strategis.ic.gc.ca/cbs.

[Darlene Zimmerman]

US revises Organic Foods Production Act

In December 1997, the US Department of Agriculture (USDA) released its long-awaited proposed rule to implement the Organic Foods Production Act of 1990 and to define uniform national standards for organic production and labelling. After working closely with USDA for seven years to develop strong national standards, members of the organic industry were outraged to discover that the Agency's proposed rules would greatly weaken existing organic standards by permitting toxic synthetic substances and a range of practices and processes that are fundamentally incom-patible with organic agriculture. In particular, the revised standards depart from existing organic standards by permitting the use of synthetic substances (e.g., chemical pesticides and fertilizers, antibiotics and parasiticides), toxic "inert" ingredients (e.g., chloro-picrin, piperonyl butoxide, toluene and xylene), genetically engineered organisms (i.e., crop plants) and ionizing radiation.

[PANNA]

Tabanids celebrate the 4th of July

Independence Day in the US (July 4) would have been celebrated a few days later if it were not for the Tabanidae. Horsefly densities were so high in Philadelphia in the summer of 1776 that the signatories of the Declaration of Independence hurried to wrap up their work a few days earlier than planned.

[Brian Fitzek]

Insect collections of the world

A meeting of people from institutions that contain the major collections of terrestrial arthropods of the world was held recently in New York. Represent-atives came from Berlin, Canada, Canberra, Copenhagen, Honolulu, London, New York, Ottawa, Paris and Washington, and are stewards to global collections of insects representing nearly 300 million specimens-- half of the world's species. Topics addressed included collection security, molecular systematics, biodiversity surveys, informatics and funding. The group also is developing a charge to inventory selected groups of the worlds species of terrestrial arthropods, a "Human Genome Project" for the natural world. FMI: Jim McKenzie; 613-759-1864; mckenziejs@em.agr.ca.

[RBIS]

New entomopathogenic bacterium

Scientists from the University of Wisconsin- Madison, working in collaboration with DowElanco, have discovered entomopathogenic properties of the bacterium, *Photorhabdus luminescens*, a widely- dispersed, multiple strain species that lives inside of and in symbiosis with nematodes. The bacterium contains a toxin that has proven effective against a broad array of insect pests, from cockroaches to boll weevils, and promises to become a potent, safe and environmentally benign weapon in the war against insect pests. "It's a voracious pathogen. One bacterial cell can kill an insect," says Jerald Ensign, a UW professor. The bacteria live inside the gut of nematodes that invade insects. Once inside an insect host, the bacteria are released from the nematode, kill the insect, and set up rounds of bacterial and nematode reproduction that turns the insect into a "protein soup", and food for large numbers of nematodes. The Photorhabdus toxin and the genes that produce it have been patented jointly by the Wisconsin and DowElanco scientists, and

the technology has been licensed to DowElanco. FMI: www.wisc.edu/news/news_images/bacteria.html.
[UW]

IPM information not getting through

Information about IPM aimed at growers seems to be stuck in the pipeline, or ignored, judging by results of a 1996 nationwide survey in Canada that covered four crops and revealed continued heavy reliance on chemical application for pest management. Canada's Expert Committee on IPM (ECIPM) developed a questionnaire to gage the availability of IPM program information and the extent of its adoption by growers. The survey, mailed to crop specialists and extension agents across Canada, focused on apples, carrots, potatoes, and canola as representing a range of crop types-- perennial and annual horticultural, and two field crops. Hugh Philip, ECIPM Chair, observed that: (1) most growers of the commodities studied have more IPM information available than they use. Pest identification, as well as monitoring and injury threshold, information was widely available, but infrequently employed. (2) most IPM programs are currently based on using chemical control tactics when treatments are required. There were both regional and crop-specific differences. (3) Formal evaluation of the season's pest management operations and results rarely was performed. Based on the survey results, Philip concluded that there is need for more research on, and information about, cultural, preventative, and biological management methods and combinations to expand available IPM choices for growers. FMI: Hugh Philip; e-mail hphilip@galaxy.gov.bc.ca; fax 250-861-7490.
[IPMnet News; Pest Management News 9(3)]

US pesticide use unchanged

The US Environmental Protection Agency (EPA) stated that about 540 million kg of pesticide active ingredients were used in the US in 1995-- about the same as in 1994. This total, which does not include chlorine, wood preservatives or specialty biocides, accounts for about 20% of world pesticide use-- 2.6 billion kg in 1995. The majority (426 million kg; 77%) was used in agriculture, while industrial, commercial and government applications accounted for 58 million kg (12%) and home and garden applications made by households accounted for 60 million kg (11%). Data for home and garden use do not account for applications made by pest control companies or other hired pesticide applicators. Weed killers were the most widely used class of pesticides, comprising 46% of US applications by volume compared to insecticides (11%), fungicides (6%) and other pesticides (37%). FMI: www.epa.gov/oppbead1/95pestsales/.

Denmark considers total pesticide ban

In response to calls from members of parliament to make the country totally organic by 2010, the Danish government has initiated an assessment of the impacts of a total pesticide ban in the country. The Danish Environmental Protection Agency (DEPA) is establishing a committee of experts to analyse how a ban would affect the country's economy, environment, health, employment and agricultural production. The committee, which will hold its first meeting in late 1997, will deliver a report to the Ministers of Environment and Energy by the end of 1998.

[PANNA]

Termites walk the line

Did you know that termites will walk along a line drawn by a ball point pen? This behaviour was demonstrated at the 1997 meeting of the Entomological Society of America. FMI: Chen, Henderson and Laine. 1998. Isolation and identification of 2-phenoxyethanol from a ballpoint pen ink as a trail following substance of *Coptotermes formosanus* Shiraki and *Reculitermes* sp. J. Entomol. Soc. 33(1).

Macro made easy

When photographing small objects near the ground (or the lab bench), it's often difficult to get close to the subject and keep the camera steady. Obtaining clearly focussed pictures without utilizing a flash unit may now be possible utilizing an idea of John Acorn (a.k.a., The Nature Nut) (see figure below). The basic concept is to use a standard camera tripod, but to adapt it for macro photography. First, remove the cap or end-piece that is located on the end of the vertical rod that functions as the immediate camera support. Remove the camera support rod and turn it upside down. Insert the inverted rod into the tripod upside

down, and presto!-- instant macro photography tripod.
[The Nature Nut; Editor]

Entomohumour

Q: What did the termite say when she entered the tavern?

A: Is the bar tender here?

-- Peter Kevan

Would a fly without wings be called a "walk"?

-- author unknown