



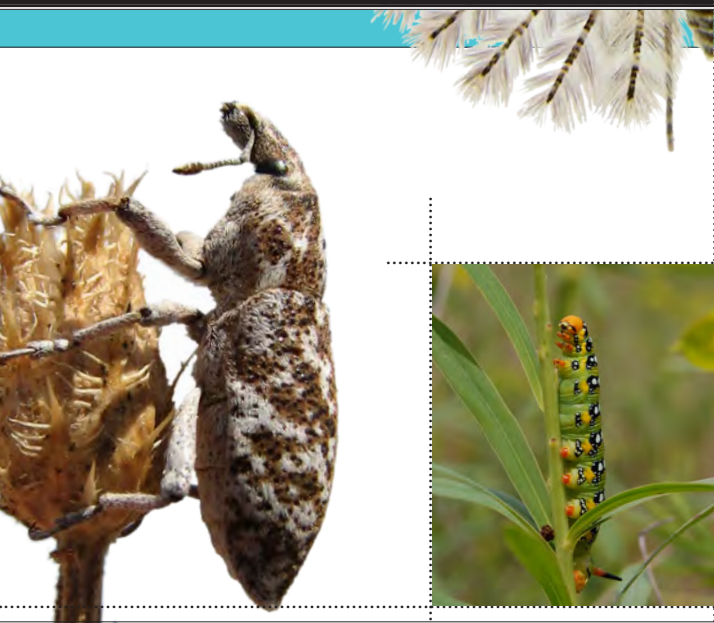
Bulletin

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Images

Sur le dos: *Cyphocleonus achates* (Fahraeus) (Coleoptera: Curculionidae) est un charançon des racines introduit au Canada pour le contrôle biologique d'espèces exotiques de centaurees. Photo: B. Van Hezewijk

Sous le titre: *Alucita adriendenisi* (Landry & Landry) (Lepidoptera: Alucitidae), retrouvé dans presque tout le Canada, a été nommé en l'honneur d'Adrien Denis qui a assisté Carl Atwood, le père de Margaret Atwood, dans ses travaux entomologiques et a laissé une impression importante à la famille Atwood. Photo: J. Dombroskie

1 Chenille du sphinx de l'euphorbe, *Hyles euphorbiae* (L.) (Lepidoptera: Sphingidae), sur l'euphorbe esule (*Euphorbia esula* L.), parc provincial de Spruce Woods au Manitoba. Photo: A. Leroux

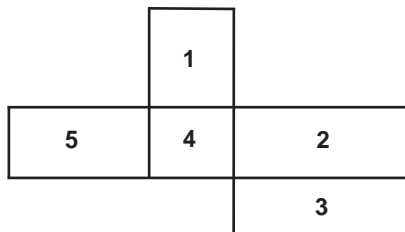
2 Accouplement de mouches de la viande (Diptera: Sarcophagidae) dans le parc de la Gatineau, Québec. Photo: M. Larrivée

3 *Piagetiella peralis* (Leidy) (Phthiraptera: Menoponidae), un parasite trouvé dans la poche du pélican d'Amérique (*Pelecanus erythrorhynchus*). Photo: T. Galloway

4 Récolte de parasitoïdes du charançon de la graine du chou, *Ceutorhynchus obstrictus* (Marsham) (Coleoptera: Curculionidae), dans des champs de canola (*Brassica* sp.). Photo: T. Haye

5 Un acarien du sol abondamment orné provenant des prairies en Alberta (Prostigmata: Stigmaeidae). Photo: H. Proctor

Couverture arrière: Une saperde du pommier, *Saperda candida* (Fabricius) (Coleoptera: Cerambycidae) près de Peterborough en Ontario. Les individus de cette espèce varient sur la prédominance de bandes claires (comme ce spécimen) ou foncées. Photo: J. Fitzsimmons





Communication – both an Art and a Science

The 2010 Vancouver JAM was a great success thanks to the efforts of the organizing committee and the 299 registrants. Thanks to all who contributed their time and energy to make this a memorable event! The meeting theme “Communication” was evident from the beginning: in letters, images, and songs (Charles Vincent 2010, Gold Medal Address). Presentations in the plenary session that followed provided the copious ways that insects and their allies communicate to one another and to humans.

The new executive was installed at the AGM on 2 November 2010. Maya Evenden is owed thanks for her strong leadership as President this past year and leaves big shoes to fill. Rose De Clerck-Floate is welcomed as 2nd Vice-President and her enthusiasm will greatly benefit our Society. Pat Bouchard, our outgoing Treasurer, was presented with an ESC Service Award in recognition of his hard work over the last 6 years. As Pat passes the

La communication – un art et une science

La réunion conjointe annuelle 2010 à Vancouver a été un véritable succès grâce aux efforts du comité organisateur et des 299 participants. Merci à tous ceux qui ont donné leur temps et leur énergie pour en faire un événement mémorable! Le thème de la réunion, « Communication », était évident depuis le début: dans les lettres, les images, les chansons (Charles Vincent 2010, Allocution du Médaillé d’or). Les présentations de la session plénière qui a suivi a fourni de nombreuses façons dont les insectes et leurs alliés communiquent entre eux et aux humains...

Le nouveau comité exécutif s’est rencontré lors de l’assemblée générale annuelle le 2 novembre 2010. Remercions Maya Evenden pour son leadership comme présidente durant la dernière année: la barre sera haute. Rose De Clerck-Floate débute comme 2^e vice-présidente et son enthousiasme va grandement profiter à notre Société. Pat Bouchard, notre trésorier sortant, a reçu un prix de service à la SEC en reconnaissance de son travail acharné depuis 6 ans. Alors que Pat passe le chéquier à Scott Brooks, la SEC reste en grande forme financière.

Le conseil d’administration a également vu quelques modifications. Chandra Moffat est notre nouvelle présidente du comité des affaires étudiantes de la SEC. Nous accueillons Chandra et remercions chaleureusement Aynsley Thielmann pour son leadership durant les deux dernières années. Kevin Floate est notre nouveau président du comité des publications, remplaçant ainsi feu Peter de Groot qui est tristement décédé juste avant la réunion. Laura Timms prend le relais de Michèle Roy en tant que présidente du comité des noms communs. Nous accueillons également Julia Mlynarek en tant que nouvelle rédactrice adjointe du *Bulletin* de la SEC, remplaçant Fred Beaulieu.

Le conseil d’administration continue d’être

cheque book to Scott Brooks, the ESC remains in sound financial shape.

The Governing Board has also seen some changes. Chandra Moffat is your new Chair of the ESC Student Affairs Committee. We welcome Chandra and extend our sincere thanks to Aynsley Thielmann for her leadership over the last 3 years. Kevin Floate is the new Chair of the Publications Committee, replacing Peter de Groot who sadly passed away just before the JAM. Laura Timms takes over from Michèle Roy as Chair of the Common Names Committee. We also welcome Julia Mlynarek as the new Assistant Editor of the *ESC Bulletin*, replacing Fred Beaulieu.

The Governing Board continues to be active on behalf of the membership. We are in the process of changing the publisher of *The Canadian Entomologist*. The Publications committee has been instructed to begin negotiations with Cambridge University Press. A special task force led by Kevin Floate did a spectacular job to evaluate the proposals received and to enable the Governing Board to come to a decision. Our journal continues to be strong under the able leadership of Editor-in-Chief Robb Bennett and his editorial team. This is a tough job and we thank them for their selfless work over the past year. Our office manager Derna Lisi continues to provide strong support to the Society and she is thanked for her contributions this past year.

We are still seeking a new Editor-in-Chief for *The Canadian Entomologist*. The ESC is seeking someone willing to take this on during our change to a new publisher and is prepared to provide some financial support. If you are interested in this challenge, please contact me or Kevin Floate, Chair of the Publications Committee.

As we close out 2010, the Year of Biodiversity has passed and we also see the end of the first decade of the 21st century. Both are significant to entomologists. There are many examples of how understanding biodiversity has contributed directly to improving human society. A recent story tells of the discovery that extracts from the brains of locusts and

actif au nom des membres. Nous nous attelons présentement à changer la maison d'édition de *The Canadian Entomologist*. Le comité des publications débutera les négociations avec les Presses de l'Université de Cambridge. Une force spéciale menée par Kevin Floate a fait un super travail en évaluant les propositions reçues et en permettant au conseil d'administration de prendre une décision. Notre revue continue d'être forte sous la supervision du rédacteur en chef, Robb Bennett, et de son équipe éditoriale. Il s'agit d'un travail ardu et nous les remercions pour leur travail dévoué durant la dernière année. Notre directrice de bureau, Derna Lisi, continue de soutenir la Société et nous la remercions pour sa contribution durant la dernière année.

Nous recherchons toujours un nouveau rédacteur en chef pour *The Canadian Entomologist*. La SEC recherche quelqu'un prêt à prendre cette charge durant notre changement de maison d'édition et est prête à fournir un soutien financier. Si vous êtes intéressé par ce défi, merci de contacter Kevin Floate, président du comité des publications.

Alors que nous terminons l'année 2010, l'année de la biodiversité se termine et nous avons vu la fin de la première décennie du 21^e siècle. Les deux sont importants pour les entomologistes. Il y a de nombreux exemples montrant comment la compréhension de la biodiversité a contribué directement à l'amélioration de la société humaine. Une histoire récente raconte la découverte que des extraits de cerveaux de locustes et de blattes peuvent tuer des super-résistants des hôpitaux tels que le *Staphylococcus aureus* résistant à la méthicilline et *Escherichia coli* qui cause des empoisonnements alimentaires. L'identification des extraits pourrait mener au développement de médicaments pour contrôler ces pathogènes (*New Scientist*, 11 septembre 2010, p. 20). Un autre exemple, et un de mes préférés, est le scarabée de Namibie, *Stenocara* sp., dont l'unique élytre collecte l'eau de la brume matinale – un design qui pourrait fournir un modèle de tente pour collecter l'eau et pour couvrir les bâtiments dans le futur (*Nature* 414,

cockroaches can kill hospital superbugs such as methicillin-resistant *Staphylococcus aureus* and *Escherichia coli* that cause food poisoning. Identifying the extracts could lead to the development of drugs to control these pathogens (*New Scientist*, 11 September 2010, p. 20). Another example and one of my favourites is the Namib desert beetle, *Stenocara* sp., whose unique elytra collect drinking water from the fog-laden early morning air – a design that could provide a model for water-trapping tent and building coverings of the future (*Nature* 414, 1 November 2001, pp. 33-34). Despite these contributions and the substantive role that insects and arachnids play in pollination, soil breakdown and other ecosystem services vital to our survival, the first decade of this century has witnessed the continued decline of funding for scientific research and denial of the contributions that science makes to society. It is our responsibility to ‘communicate’ the case for the significance of entomological research and the need for ongoing support. Being armed with good facts and examples that support our argument is essential. If we were to publish in each issue of the *ESC Bulletin* one or two examples of how our knowledge of insects benefits society, and post these on the website, we would soon have many facts and examples at our disposal about the importance of insects and arachnids to global well-being.

It is an honour and a pleasure to serve as ESC President and I hope to continue the strong leadership this Society has experienced for many years.

1 novembre 2001, p. 33-34). Malgré ces contributions et le rôle important que les insectes et les arachnides jouent dans la pollinisation, la désagrégation du sol et d’autres rôles dans les écosystèmes, vitaux pour notre survie, la première décennie de ce siècle a été témoin du déclin continu du financement pour la recherche scientifique et le dénie de la contribution que la science apporte à la société. Il est de notre responsabilité de « communiquer » afin de montrer l’importance de la recherche entomologique et le besoin de support continu. Être armé de bons exemples et faits supportant notre argumentation est essentiel. Si nous pouvions publier dans chaque numéro du *Bulletin de la SEC*, un ou deux exemples de la façon dont notre connaissance des insectes bénéficie la société, et de publier ces exemples sur notre site Internet, nous aurions bientôt de nombreux faits et exemples disponibles pour montrer l’importance des insectes et des arachnides à notre bien-être global.

C’est un honneur et un plaisir de servir comme président de la SEC, et j’espère poursuivre le fort leadership que cette Société a montré depuis de nombreuses années.



Marie-Pierre Mignaut

A white chocolate-coloured (freshly moulted) Madagascar hissing cockroach, *Gromphadorhina portentosa*. Would more people eat insects if they were all that colour?



The Ridiculous Results of Snot-Nose and Farty-Pants: The Art of the Entomological Presentation

In my never-ending quest to bring *Moth Balls* to the masses, I came up with the somewhat frightening idea of creating a Power Point presentation to allow me to give a *Moth Balls* presentation at the recent ESC meeting. Sadly (or not), this never came to fruition; however, the article below is based loosely on what would have been presented.

The idea came about as I was trying to write the abstract for my regular scientific talk. Everyone who has presented a talk has had to go through the same decision-making process. What should I include in the abstract? How should I present my data? Will my data support the conclusions from my abstract? Will people laugh at my attempt at

humour or (heaven forbid) will they laugh at me? I hope that the information below will help make your next entomological presentation run more smoothly (or at least less disastrously).

Top ten things to remember when writing/ giving an entomological conference presentation

1) You're an entomologist, not a prophet.

The call for abstracts always comes months before the actual conference and usually a long time before the results of ongoing research are compiled and analyzed. Unless you know all of your results, don't make the mistake of mentioning highly specific findings in your abstract. When it comes to conference abstracts, "vague" is the operative word.

Warning signs you've gone too far: 1) any mention of the word "significant"; 2) any use of the word "conclusive"; 3) any reference to your forthcoming Nobel Laureate acceptance speech.

2) You're an entomologist, not an optometrist.

Large font size and correct contrast between text and background are essential to be clearly understood. In other words, it's not your job to determine what percentage of your audience can read 4 point font at 40 paces. Nor should you be testing for colour blindness by using red lettering on a lime green background.

Warning signs you've gone too far: 1) disruption in talk as audience members all move forward to within 6 feet of projector screen; 2) people in front row continually rubbing eyes and administering Visine drops during presentation; 3) you have the uncontrollable urge to utter the phrase: "better now or... now" between slides.

Andrew Bennett is a research scientist with Agriculture and Agri-Food Canada in Ottawa working on the taxonomy of Ichneumonidae. He received his PhD at the University of Toronto. Contact details: e-mail: andrew.bennett@agr.gc.ca, tel.: (613) 759-1900.

3) You're an entomologist, not an ichthyologist.

Appropriate subject matter is expected. Curiously, entomologists attending an entomology conference expect to hear about insects or their relatives, or at least organisms that interact with insects and their relatives. Presenting research that deals exclusively with fish, no matter how well presented or well intentioned will likely be greeted with a lukewarm reception (at best).

Warning signs you've gone too far: 1) names of fish in your title slide; 2) lack of names of arthropods in your title slide; 3) questions from the audience such as, "what the hell did that have to do with insects?"

4) You're an entomologist, not a special effects expert.

Certainly, Power Point has some intriguing special effects, but it's not your job to try to include all of these in a single presentation. Screeching tire sounds are NOT mandatory at the transition of every slide. Nor is fake applause (although it might be the only applause you receive if you use too many special effects).

Warning signs you've gone too far: 1) you can't help making a polite enquiry to scientific program chair whether 3-D IMAX projectors will be available; 2) people in front row given motion sickness bags before talk; 3) your presentation is narrated by Jar Jar Binks.

5) You're an entomologist, not a rock star.

Occasional reference to yourself and your own research during your presentation is expected (if you don't cite yourself, who else will)? Referencing all (and only) your own studies during a talk is just plain obnoxious.

Warning signs you've gone too far: 1) insistence on citing your first publication despite stunning lack of applicability to current research: e.g., Current phylogenetic results are clearly supported by Bennett (1992): Comparison of the efficacy of the standard plunger versus the toilet snake as a solution to impacted toilet clog removal. *The Suburban Plumber*, **17**: 37-43; 2) personal conflict arising from difficult decision whether to use 95 or 100 point font for name on title slide; 3) unfortunate decision to paint face and wear platform shoes and shiny, spandex body suit for your presentation.

6) You're an entomologist, not a Jedi warrior.

Laser pointers are useful tools to highlight important aspects of a complex slide, but they should be used judiciously lest they distract from the talk. The most effective way to use a laser pointer is to focus the light on the image to be highlighted and HOLD IT STILL! Attempting to underline or encircle the structure with laser light is much harder for the audience to see (not to mention quite irritating).

Warning signs you've gone too far: 1) smoke-filled gashes and circles in projector screen following your talk; 2) pending lawsuits for retinal damage by irate audience members; 3) mysterious urge to travel to Dagobah after the conference to complete your training.

7) You're an entomologist, not an ill-humoured film or restaurant critic.

Objectively and respectfully critiquing a colleague's research during your talk is acceptable. Making personal attacks or derogatory comments about their mental state, or questioning their personal hygiene habits is definitely not.

Warning signs you've gone too far: 1) discovery that you have employed the adjective "idiotic" twice in the same slide; 2) excessive use of voodoo dolls during presentation; 3) creation of colourful pseudonyms for colleagues, e.g., Snot-Nose and Farty-Pants (2008) presented the following ridiculous results..."

8) You're an entomologist, not a psychiatrist.

Graphs and other figures depicting data should be made clear by keeping them simple and using large sized fonts on the axes. Whereas it is often tempting to combine multiple data sets into a single graph (especially if time is lacking in a short presentation), doing so may render your figure no more clearly interpretable than a Rorschach ink blot test.

Warning signs you've gone too far: 1) explanation of line graph prefaced by: "it's good that this projector can display infinite colours"; 2) dismay over lack of 5-dimensional pie-chart function in Power Point; 3) answer to audience question regarding your extremely complex Figure 1 is: "An interesting question, but what does Figure 1 mean to you?"

9) You're an entomologist, not a stand-up comedian.

A bit of humour in an oral presentation is a good way to keep the audience focused, but the amount (and type) of humour should be carefully considered and kept in balance with the scientific content of the presentation.

Warning signs you've gone too far: 1) eerie, uncomfortable silence following your first (of 17) jokes; 2) a Catholic cockroach, a Protestant shield bug and a Jewish mantis walk into a bar...; 3) ENTOMO-STRIPTEASE! (it seemed so much funnier in practice session).

10) You're an entomologist, not a Russian novelist.

Most talks are scheduled for about 13 minutes of speaking followed by 2 minutes of questions. It's not possible to present the entomological equivalent of *War and Peace* in this time period, although some presenters appear to try.

Warning signs you've gone too far: 1) Moderator stands up half way through your first slide; 2) subsequent speaker begins presentation while you're still talking; 3) difficulty being heard over the sound of vacuuming by hotel's janitorial staff.

I hope that these words (of wisdom?) will help during the formulation and presentation of your next entomological talk. Note that any reference to Snot-Nose and Farty-Pants (2008) will require a citation to this article (Bennett, 2010) (preferably in 100 point font).

Join me in the next issue as I unashamedly reveal more visually impressive *Moth Balls*.



Steve Marshall

A scorpion fly (Mecoptera) – *Panorpa helena*.

Labo de Charles Vincent, AAC, Saint-Jean-sur-Richelieu

Après avoir complété un BSc en bio-agronomie à l'Université Laval, Charles Vincent a fait une Maîtrise et un PhD en entomologie à l'Université McGill. Depuis 1983, il travaille comme chercheur au Centre de Recherche et Développement en Horticulture d'Agriculture Canada à Saint-Jean-sur-Richelieu, Québec. Il est professeur adjoint à l'Université McGill depuis 1984 et professeur invité à l'Université du Québec à Montréal depuis 1992. Depuis 2000, il est professeur invité à l'Université de Picardie Jules Verne à Amiens (France), où il donne, chaque année, un atelier d'écriture scientifique pendant un mois. Ses recherches portent essentiellement sur la gestion des insectes d'importance agricole, notamment sur la lutte physique et biologique, de même que sur le développement de biopesticides.

Le groupe

Charles Vincent partage le Laboratoire 214 avec son collègue Noubar J. Bostanian, avec lequel il collabore sur des projets concernant notamment les insectes de la vigne et de développement de biopesticides d'origine végétale. Ce partage de laboratoire fait en sorte que la densité de population humaine est parfois très élevée, tel que démontré par les Figures 1 et 2.



Charles Vincent

Figure 1. Pause café du Bar chez Ben. Sont présents sur la photo, Noubar J. Bostanian, Pierre Lemoyne et Charles Vincent de même que plusieurs étudiants, stagiaires et collaborateurs. Ces pauses permettent à l'équipe de socialiser et les profits servent à inviter les étudiants et stagiaires au restaurant.

Gradués récents (Figures 3-8)

Charles Vincent travaille étroitement avec trois Universités. Les travaux de ses étudiants gradués visent à acquérir des connaissances permettant la gestion des insectes d'importance agricole.

Dominique Fleury (dominique.fleury@eichangins.ch) a effectué son PhD à l'Université du Québec à Montréal sous la co-direction de Charles Vincent et de Yves Mauffette. Le titre de sa thèse était: «Ecologie comportementale de la punaise terne (*Lygus lineolaris*) sur la vigne». Il



Figure 2. Chaque année, l'équipe est invitée à un BBQ chez Charles Vincent. Rangée du bas, de gauche à droite: Raphaël Royauté, Julien Saguez, Florian Machefer, Charlotte Karslake, Marion Langlet, Laura Soulié, Charles Vincent. Rangée du haut, de gauche à droite: Pierre Lemoyne, Flavie Tiret, Mathilde Massinon, Thomas Aubert.

est maintenant professeur et chercheur à l'École d'ingénieur de Changins en Suisse. Yves Mauffette est vice-recteur à la Recherche et à la création à l'Université du Québec à Montréal depuis septembre 2009.

Aïssata Camara (mmestell2002@yahoo.fr) a effectué son PhD à l'UQAM sous la co-direction de Michel Raymond et Charles Vincent. Le titre de sa thèse était: «Lutte contre *Sitophilus oryzae* L. (Coleoptera: Curculionidae) et *Tribolium castaneum* Herbst (Coleoptera: Tenebrionidae) dans les stocks de riz par la technique d'étuvage traditionnelle pratiquée en Basse-Guinée et l'utilisation des huiles essentielles végétales». Elle est maintenant chef du Département d'évaluation environnementale au Centre d'études et de recherches en environnement (CERE) de l'Université de Conakry en Guinée. Michel Raymond était professeur en écologie à l'Université du Québec à Montréal. Il est maintenant à la retraite.

Laurence Brunissen (laurence.brunissen@u-picardie.fr) a effectué un PhD à l'Université de Picardie Jules Verne à Amiens (France) sous la co-direction de Philippe Giordanengo et de Charles Vincent. Le titre de sa thèse était: «Interactions plantes/ phloémophages: Modalités et conséquences des réponses systémiques induites lors d'un stress». Elle fait maintenant un post-doc à l'Université de Picardie Jules Verne à Amiens (France).

Agnieszka Kwasniewska (agnes.kwasniewska@gmail.com) a effectué un MSc à l'Université McGill sous la co-direction de Chris Buddle (Médaille C. Gordon Hewitt de la SEC-2006) et de Charles Vincent. Le titre de sa thèse était: «Field and laboratory studies on the effects of fruit volatiles on *Rhagoletis mendax* (Diptera: Tephritidae) adults».

Bruno Fréchette (frechette_bruno@yahoo.ca) a effectué un post-doc au laboratoire de Charles Vincent en collaboration avec Éric Lucas (UQAM) sur les pucerons de la pomme de terre. Il est maintenant Directeur du Centre de recherche agroalimentaire de Mirabel, Québec.

Caroline Provost (carosebas3@yahoo.ca) a effectué un post-doc au laboratoire de Charles Vincent sur l'optimisation des paramètres d'élevage du carpocapse de la pomme en vue de production commerciale de baculovirus. Elle est maintenant chercheur à Axter Sciences à Chambly, Québec.

Étudiants présentement inscrits à un programme gradué (Figures 9-11)

Fatiha Bensadia (memecht@hotmail.fr) effectue présentement un PhD à l'Université du Québec à Montréal sous la co-direction de Charles Vincent et de Yves Mauffette. Le thème de ses recherches est la nutrition des tordeuses associées à la vigne.

Raphael Royauté (raphael.royaute@gmail.com) effectue présentement un PhD à l'Université McGill sous la co-direction de Chris Buddle et Charles Vincent. Le thème de ses recherches est les syndromes comportementaux chez les araignées prédatrices en agriculture.

Julien Saguez (julien.saguez@agr.gc.ca) a effectué un PhD à l'Université de Picardie Jules Verne à Amiens (France) sous la direction de Philippe Giordanengo et de Charles Vincent. En tant qu'un des meilleurs étudiants de l'Université de Picardie Jules Verne à Amiens (France), Julien a été présenté au Président Jacques Chirac à l'Élysée (Paris). Il effectue présentement un post-doc au laboratoire de Charles Vincent sur l'étude des cicadelles des vignobles, notamment sur les aspects relatifs à la transmission de phytoplasmes.

Séances de travail avec des collègues (Figures 12 et 13)

Depuis quelques années, Charles a fait des séances de travail à l'étranger avec de nombreux collègues, notamment pour faire des projets de livres.

Il a travaillé avec Catherine Regnault-Roger et Bernard J.R. Philogène à deux éditions du livre «Biopesticides d'origine végétale» (Lavoisier Tech et Doc, Paris). La première édition de cet ouvrage paru en 2002, a été publiée en 2004 en espagnol, et 2005 en anglais. La seconde édition



Figures 3 à 11: 3. Dominique Fleury; 4. Aïssata Camara; 5. Laurence Brunissen; 6. Agnieszka Kwasniewska; 7. Bruno Fréchette; 8. Caroline Provost; 9. Fatiha Bensadia; 10. Raphael Royauté; 11. Julien Saguez.

de cet ouvrage paru en 2008 a été vendue à 4000 exemplaires et une traduction chinoise est en cours. B.J.R. Philogène (bphilog@yahoo.ca) (Médaille d'or de la SEC en 2000) était professeur à l'Université d'Ottawa et est maintenant à la retraite. C. Regnault-Roger (regnault.roger@univ-pau.fr) est professeur à Université de Pau et des Pays de l'Adour (Pau, France). En 2010, elle a reçu la légion d'honneur du Président Nicolas Sarkozy.



Charles Vincent

Figure 12. B.J.R. Philogène, Catherine Regnault-Roger et Charles Vincent.

Charles Vincent s'est rendu à l'Instituto de Ecologia à Xalapa (Mexique) pour travailler sur le projet de livre «Biorational Tree-Fruit Management» (CABI- Wallingford, UK, 2009) pour honorer la mémoire de feu Ronald J. Prokopy. Il a travaillé avec Tracy C. Leskey (tracy.leskey@ars.usda.gov), chercheur au USDA-ARS Appalachian Fruit Research Station, à Kearneysville en Virginie Occidentale, et Martin Aluja (martin.aluja@inecol.edu.mx), qui est maintenant Directeur national de l'Instituto de Ecología du Mexique.



Charles Vincent

Figure 13. Charles Vincent, Tracy C. Leskey et Martin Aluja.

Pour de plus amples renseignements, consultez: <http://eduportfolio.org/6644>



ESC/ESBC JAM 2010

The Joint Annual Meeting of the Entomological Societies of British Columbia and Canada in Vancouver was another fantastic meeting. It was great to see so many familiar faces and to meet so many new people as well. The talks and posters were excellent and inspiring, as always, and there was plenty of opportunity for socializing and networking at the mixers and banquet. Many enthusiastic entomologists wore awesome insect costumes to the Halloween Mixer, including Christa Rigney with her giant predacious water bug costume (see photo below). Mark Hummel and the Blues Survivors band provided some excellent after-dinner entertainment, getting many folks up and dancing after the banquet. Overall, the meeting was a great success and I hope to see you all again at next year's JAM in Halifax.

Insect Trivia Contest

The Student Mixer and Second Annual Insect Trivia Contest were well attended and enjoyed by all who participated. The winners of the Insect Trivia Contest were the "Traumatic Inseminators": Boyd Mori, Adam Blake, Caleigh Irwin, and Swaroop Kher (see photo below) who were awarded insect-related prizes, kindly donated by Fiona Hunter and the Local Organizing Committee, including T-shirts, mugs and puppets, at the banquet.

Réunion conjointe annuelle SEC/SECB 2010

La réunion conjointe annuelle des Sociétés d'entomologie de Colombie-Britannique et du Canada, ayant eu lieu à Vancouver, a été, encore une fois, fantastique. C'était génial de voir autant de visages familiers et de rencontrer de nouvelles personnes. Les présentations et les affiches étaient excellentes et inspirantes, comme toujours, et il y avait de nombreuses opportunités pour socialiser aux cocktails et au banquet. Plusieurs entomologistes enthousiastes portaient de magnifiques costumes d'insectes à la soirée Halloween, incluant Christa Rigney avec son costume de punaise d'eau prédatrice géante (voir la photo plus bas). Le groupe Mark Hummel and the Blues Survivors nous a très bien divertis après le repas, entraînant plusieurs personnes à danser après le banquet. De façon générale, la réunion a été un grand succès et j'espère vous voir l'an prochain à Halifax.

Quiz entomologique

Le cocktail étudiant et le deuxième quiz entomologique annuel étaient attendus et ont plu à tous les participants. Les gagnants du quiz entomologique sont l'équipe connue sous le nom de « Traumatic Inseminators » (voir photo plus bas) et ont reçu des prix entomologiques, gracieusement offerts par Dr. Fiona Hunter et le comité organisateur local, tels que des t-shirts, tasses et marionnettes lors du banquet.

Enchères silencieuses

Les enchères silencieuses se sont étonnamment bien déroulées cette année, avec plus de 1200\$ amassés pour le fonds des bourses d'études de la SEC. Merci à tous les membres du comité des affaires étudiantes qui ont aidé à la table des enchères silencieuses, incluant Chandra Moffat, Lars Andreassen, Tamara Richardson, Leah Flaherty, Paul Abram, et Melanie Hart. Nous remercions également tous ceux qui ont donné généreusement et qui ont acheté des objets aux enchères silencieuses.



Aynsley Thielman

Christa Rigney in her giant predacious water bug costume (with her handsome prince, Andrew!)

Silent Auction

The Silent Auction went surprisingly well this year, with over \$1200 raised towards the ESC Student Scholarships and Awards Fund. Thanks to all the Student Affairs Committee members who helped out at the Silent Auction table, including Chandra Moffat, Lars Andreassen, Tamara Richardson, Leah Flaherty, Paul Abram, and Melanie Hart. Our thanks and appreciation also go out to all those who generously donated and purchased Silent Auction items.

Graduate Student Symposium

The GSS was organized by three dedicated volunteers, Chandra Moffat (Chair), Leah Flaherty and Tamara Richardson. The symposium showcased six graduate students nearing the end of their degree programs and allowed each student 25 minutes to present their thesis research, plus 5 minutes for questions. Abstracts underwent a selection process, and

Symposium des étudiants gradués

Le symposium des étudiants gradués fut organisé par trois bénévoles dévoués, Chandra Moffat (présidente), Leah Flaherty and Tamara Richardson. Le symposium présente six étudiants gradués près de la fin de leur programme et alloue 25 minutes à chaque étudiant pour présenter ses recherches comme un tout, suivi de 5 minutes de questions. Les résumés passent par un processus de sélection et les étudiants sélectionnés pour le symposium reçoivent un certificat et un montant honoraire de 100\$ durant le banquet. Le symposium de cette année a été apprécié par tous ceux qui ont participé, et les noms, les titres et les résumés des étudiants sélectionnés pour le symposium des étudiants gradués se trouvent à la fin de la rubrique *Aile étudiante*.

Répertoire des formations entomologiques au Canada

Durant les deux dernières années, le comité des affaires étudiantes a terminé une révision du répertoire des formations entomologiques au Canada, un document disponible dans la section des affaires étudiantes du site Internet de la SEC afin d'aider les étudiants à trouver une institution potentielle pour leur formation et éducation en entomologie. La dernière mise à jour étant de 2005, nous avons trouvé beaucoup de formations qui n'étaient plus disponibles, et particulièrement les cours spécifiques offerts dans les différentes institutions. Alors plutôt que de détailler tous les cours disponibles, nous avons inclus un lien vers la liste des cours de chaque institution. Si vous connaissez des facultés d'institutions postsecondaires canadiennes qui se spécialisent en entomologie et qui ne sont pas incluses dans la version mise à jour du répertoire, veuillez s.v.p. envoyer les noms au représentant étudiant qui pourra alors les inclure. Merci à tout le monde, particulièrement Jess Vickruck, pour leur contribution au répertoire de 2010. Le répertoire de 2010 se trouve dans la section des affaires étudiantes du site Internet de la SEC (<http://www.esc-sec.ca/directed.html>).



Dezema Huber

Aynsley Thielman with the "Traumatic Inseminators" (Boyd Mori, Adam Blake, Caleigh Irwin, and Swaroop Kher), winners of the Insect Trivia Contest.

those students selected to speak in the GSS received certificates and a \$100 honorarium at the banquet. This year's symposium was enjoyed by all who participated and the names, titles and abstracts of those selected to present at the GSS can be found at the end of the *Student Wing* section.

Directory of entomology education in Canada

Over the last 2 years, the Student Affairs Committee completed a revision of the Directory of Entomology Education (DOEE) in Canada, available in the Student Affairs section of the ESC website (<http://www.esc-sec.ca/directed.html>), to help students locate potential schools for entomological education and training. Last updated in 2005, we found that many listings were no longer available, particularly with respect to specific courses offered at individual institutions. So, instead of listing all the courses available, we have included links to each institution's course calendar. If you are aware of any faculty at Canadian post-secondary institutions that specialize in entomology who are not included in the

Nouvelle représentante étudiante de la SEC

Ce fut un honneur de servir comme représentante étudiante de la SEC durant les deux dernières années, et je suis heureuse de passer le filet à papillons à la nouvelle représentante étudiante: Chandra Moffat. Chandra est une étudiante à la maîtrise à l'Université de Colombie-Britannique, sur le campus Okanagan, à Kelowna, Colombie-Britannique. Elle étudie la sélection des hôtes sur des échelles spatiales multiples chez une guêpe à galle, proposée comme agent de lutte biologique contre les épervières envahissantes en Amérique du Nord, encadrée par Dr. Jason Pither et Dr. Bob Lalonde. Je suis sûre qu'elle fera du bon boulot puisqu'elle a déjà commencé à travailler pour les étudiants et planifier le travail avec le conseil d'administration afin de changer les critères d'éligibilité pour la compétition du prix du président et ainsi permettre aux étudiants de premier cycle de participer.

Merci Chandra, et bonne chance avec tes responsabilités étudiantes dans le futur!

updated version of the DOEE, please forward their name to the ESC Student Representative so that they can be added to the list. Thanks to everyone, especially Jess Vickruck, for their contributions to the 2010 DOEE.

New ESC student representative

It has been an honour to serve as the Student Representative for the ESC for the last 2 years, and I am pleased to pass the collecting net on to the new Student Representative for the Society: Chandra Moffat. Chandra is an MSc student at the University of British Columbia, Okanagan Campus, in Kelowna. She is studying host selection at multiple spatial scales of a cynipid gall wasp, proposed as a biological control agent for hawkweeds invasive in North America, and is supervised by Jason Pither and Bob Lalonde. I'm sure she will do a great job as she has already begun to advocate on behalf of students and plans to work with the Board to change the eligibility criteria for the President's Prize competition to allow undergraduate students to compete as well.

Thanks Chandra, and good luck with all your student-related endeavors in the future!

Thesis Roundup

Thanks to everyone who sent in submissions for the Thesis Roundup. Students, supervisors, even colleagues, are encouraged to send in submissions, but students themselves must give us permission to print their email address (if desired). If you or someone you know have recently defended their thesis, please forward the following information to Chandra Moffat at chandra.moffat@gmail.com: Name of student, student email address (optional), degree, date completed, title, supervisor(s), institution.



Rick West

The minute pirate bug (aka Chandra Moffat, the new Student Representative) (on right), with her butterfly friend, Susan Horton

Foisonnement de thèses

Merci à tous ceux qui ont envoyé des soumissions pour le foisonnement de thèses. Les étudiants, directeurs et même collègues sont encouragés à envoyer leurs soumissions, mais les étudiants eux-mêmes doivent nous donner l'autorisation d'afficher leur adresse électronique (si désiré). Si vous, ou quelqu'un que vous connaissez avez récemment soutenu leur thèse, veuillez s.v.p. transférer l'information à Chandra Moffat (chandra.moffat@gmail.com): Nom de l'étudiant, adresse courriel (optionnel), diplôme, date d'obtention, titre, directeur(s), institution.

Blake, Adam J. MSc. September 2010. *The effects of soil and plant nutrients on the oviposition preference, larval performance and spatial dynamics of Ceutorhynchus obstrictus and its parasitoids.* Supervisors: Lloyd Dossdall, Department of Agricultural, Food and Nutritional Science and Andrew Keddie, Department of Biological Sciences, University of Alberta. (ajblake@ualberta.ca)

Djernaes, Marie. PhD. August 2010. *Morphology, function and evolution of the sternum V gland in Amphiesmenoptera.* Supervisor: Felix Sperling, Department of Biological Sciences, University of Alberta. (marie_djernaes@hotmail.com)

Miluch, Christine E. MSc. July 2010. *Development of a semiochemical-based monitoring system for diamondback moth, Plutella xylostella (L.) (Lepidoptera: Plutellidae), in canola in Alberta.* Supervisors: Maya Evenden, Department of Biological Sciences and Lloyd Dossdall, Department of Agricultural, Food and Nutritional Science, University of Alberta. (miluch@ualberta.ca)

Subramaniam, Ravindran. MSc. March 2010. *Identifying agronomic practices that conserve and enhance natural enemies of root maggots (Delia spp.) (Diptera: Anthomyiidae) in canola.* Supervisor: Lloyd Dossdall, University of Alberta. (rsubrama@ualberta.ca)

Taylor, Graeme. MSc. Date required *Actual and potential host range of Arsenophonus nasoniae in an ecological guild of filth flies and their parasitic wasps.* Supervisors: Steve Perlman and Kevin Floate (AAFC, Lethbridge), Department of Biology, University of Victoria.

Vankosky, Meghan A. MSc. August 2010. *Integrated pest management of Sitona lineatus L. (Coleoptera: Curculionidae) in crops of Pisum sativum L. (Fabales: Fabaceae) in western Canada.* Supervisors: Héctor Cárcamo, AAFC, Lethbridge, and Lloyd Dossdall, Department of Agricultural, Food and Nutritional Science, University of Alberta. (meghanv@ualberta.ca)



Marie-Pierre Mignault

A male *Cyclocephala erotylina* (Scarabaeidae: Dynastinae), accompanied by a nematoceran fly on a balcony floor in Tapachula, Mexico.

Thesis Roundup Submission Form

Name: _____

Email address: _____

Degree: _____

Date: _____

Title: _____

Supervisor(s): _____

Institution: _____

**Please note: students and/or supervisors may be contacted to verify the information if sent from second parties.

Formulaire de soumission – Foisonnement de thèses

Nom: _____

Courriel: _____

Diplôme: _____

Date: _____

Titre: _____

Directeur(s): _____

Institution: _____

**Veuillez noter que les étudiants et/ou les directeurs pourront être contactés pour vérifier les informations si envoyées par une tierce personne.

Please send to/Envoyer à:

Chandra Moffat
Unit of Biology and Physical Geography
University of British Columbia, Okanagan Campus
ASC 201, 3333 University Way
Kelowna BC V1V 1V7



Rick West

Graduate Symposium speakers: back row (from left): Michael Wogin, David Jack, Chris Borkent, Kathleen Ryan; front row (from left): Aynsley Thielman and Joel Gibson.

Graduate Student Symposium 2010

Joint Annual Meeting, 2 November 2010, Vancouver, British Columbia

Chair: Chandra Moffat

Speakers and Abstracts (in order of presentation)

Michael J. Wogin¹, David R. Gillespie², Tim Haye³, Bernard R. Roitberg¹

¹Biological Sciences, Simon Fraser University, Burnaby, British Columbia; ²Agriculture & Agri-Food Canada, Pacific Agri-Food Research Centre, Agassiz, British Columbia; ³CABI, Europe Switzerland, Delémont, Switzerland

Intra- and interspecific competition between parasitoids of the cabbage seedpod weevil: Effects on sex ratios and consequences for biological control

In any classical biological control programme, it is important to not only assess potential non-target effects, but also to have an in-depth knowledge of the ecosystem. Intra-guild competition can have unpredictable effects, potentially disrupting biological control of the pest in question. *Trichomalus perfectus* and *Mesopolobus morys* are the two main European parasitoids of the cabbage seedpod weevil. Both are candidates for introduction as classical biological control agents in Canada. In order to determine the ideal biological control community for this system, we examined the effects of intra- and interspecific parasitoid competition in field and laboratory experiments. We found no increase in host suppression with more than one species

present, suggesting that a multiple-species introduction would not be more effective at controlling pest populations than a single-species introduction. Although neither species is superior in its competitive ability or host suppression efficacy, there were some notable trends in the outcomes of competition. In particular, *T. perfectus* produced a female-biased offspring sex ratio in response to increasing intraspecific competition. This result is contrary to the sex ratio predicted by local mate competition theory, and may be due to both maternal behaviour and differential larval mortality of the sexes. We use a theoretical approach to explore how this shift might affect biological control of the cabbage seedpod weevil, incorporating potential influence of increased virginity in the population.

Compétition intra- et interspécifique entre les parasitoïdes du charançon de la graine du chou: les effets sur la proportion de mâles et les conséquences pour la lutte biologique

Dans tout programme de lutte biologique classique, il est important non seulement d'évaluer les effets potentiels non-ciblés, mais également d'avoir une connaissance approfondie de l'écosystème. La compétition intra-gilde peut avoir des effets imprévisibles, comme une perturbation de la lutte biologique sur le ravageur en question. *Trichomalus perfectus* et *Mesopolobus morys* sont les deux principaux parasitoïdes européens du charançon de la graine du chou. Les deux sont des candidats pour introduction en tant qu'agents de lutte biologique classique au Canada. Afin de déterminer la communauté idéale de lutte biologique pour ce système, nous avons examiné les effets de la compétition intra- et interspécifique des parasitoïdes par des expériences de terrain et de laboratoire. Nous n'avons trouvé aucune augmentation de la suppression des hôtes lorsque plus d'une espèce est présente, suggérant qu'une introduction de multiples espèces ne serait pas plus efficace pour contrôler les populations de ravageur qu'une introduction d'une seule espèce. Bien qu'aucune espèce ne soit supérieure dans ses habiletés compétitives ou dans l'efficacité de suppression de l'hôte, nous avons trouvé des tendances dans le résultat de la compétition. En particulier, *T. perfectus* produit une proportion de mâles diminuée en réponse à l'augmentation de la compétition intraspécifique. Ce résultat est contraire à la proportion de mâles prédite par la théorie du « local mate competition » et pourrait être causé par le comportement maternel et la mortalité différentielle des sexes chez les larves. Nous utilisons une approche théorique afin d'explorer comment cette différence peut affecter la lutte biologique du charançon de la graine du chou, en incorporant l'influence potentielle de l'augmentation du nombre de femelles vierges dans la population.

Aynsley Thielman, Fiona F. Hunter
Biological Sciences, Brock University, St. Catharines, Ontario

Investigation of cryptic species status within *Anopheles* (Diptera: Culicidae) species in Canada using a multidisciplinary approach

Anopheles mosquitoes are common throughout North America, but knowledge of anopheline species in Canada is limited primarily to morphological data. Current *Anopheles* research in malaria-endemic regions has revealed that many "species" are complexes of isomorphic species distinguishable based on other types of data, such as polytene chromosome and DNA sequence data. Members of species complexes often differ in behavioural and/or ecological traits, such as host feeding preference and/or larval habitat preference, which can affect their ability to transmit disease. The objective of my research was to investigate the cryptic species status of *Anopheles* mosquitoes in Canada using a multidisciplinary approach. Specimens were collected from across Canada and examined using morphological, molecular, and ecological data. Preliminary identifications suggested that two species currently known only from the USA might be in Canada, but could not be confirmed using scanning electron microscopy of egg morphology. Three

molecular markers (COI, ITS1 and ITS2) were analyzed and levels of inter- and intraspecific variation determined. Intraspecific variation in COI and ITS2 was high in two of the six species examined and may indicate the presence of cryptic species. ITS1 sequences were obtained from five species and showed greater levels of intraspecific variation, even intra-individual variation in one species examined. In addition, ecological data recorded during specimen collection was analysed to determine larval habitat preferences. The results of these studies and a discussion of the cryptic species status of *Anopheles* mosquitoes in Canada will be presented.

Investigation du statut des espèces cryptiques parmi les espèces d'*Anopheles* (Diptera: Culicidae) au Canada en utilisant une approche multidisciplinaire

Les moustiques *Anopheles* sont communs en Amérique du Nord, mais la connaissance des espèces anophéliques au Canada est limitée principalement aux données morphologiques. La recherche actuelle sur *Anopheles* dans les régions de malaria endémique a révélée que plusieurs « espèces » sont des complexes d'espèces isomorphiques discriminables à l'aide d'autres types de données, tels que le chromosome polythène et les séquences d'ADN. Les membres des complexes d'espèces diffèrent souvent par des traits comportementaux et/ou écologiques, tels que la préférence d'hôtes de nutrition et/ou la préférence larvaire de l'habitat, qui peuvent affecter leur capacité à transmettre des maladies. L'objectif de mes recherches était d'investiguer l'état des espèces cryptiques de moustiques *Anopheles* du Canada en utilisant une approche multidisciplinaire. Des spécimens ont été récoltés dans tout le Canada et examinés en utilisant des données morphologiques, moléculaires et écologiques. Les identifications préliminaires ont suggéré que deux espèces actuellement connues seulement aux É.-U. pourraient être présentes au Canada, mais leur présence n'a pu être confirmée en utilisant la microscopie électronique à balayage sur la morphologie des œufs. Trois marqueurs moléculaires (COI, ITS1 et ITS2) ont été analysés et les niveaux de variation inter- et intraspécifique déterminés. La variation intraspécifique sur COI et ITS2 était élevée dans deux des six espèces examinées et pourrait indiquer la présence d'espèces cryptiques. Les séquences ITS1 ont été obtenues de cinq espèces et ont montré de grands niveaux de variation intraspécifique, incluant de la variation intra-individuelle chez une des espèces examinées. De plus, les données écologiques enregistrées durant la récolte des spécimens ont été analysées afin de déterminer la préférence d'habitat des larves. Les résultats de ces études et une discussion sur le statut des espèces cryptiques chez les moustiques *Anopheles* au Canada seront présentés.

Kathleen Ryan¹, Peter de Groot², Sandy M. Smith¹

¹Forestry, University of Toronto, Toronto, Ontario; ²Canadian Forest Service, Sault Ste. Marie, Ontario

Interactions between the introduced wood wasp, *Sirex noctilio*, competing phloem- and wood-boring beetles, and their fungal associates

Sirex noctilio is a significant pest in its introduced range in the Southern Hemisphere where it causes considerable mortality in non-native pines. In its native Eurasian range, however, *S. noctilio* is of little concern due perhaps to its interactions with a well-developed community of pine-inhabiting insects. If such interactions occur, they may limit the wood wasp's impact in its newly introduced range in North America. My research addresses two broad questions: 1) Does *S. noctilio* share its habitat with other insects and if so, whom? 2) Are there signs that co-habitants affect *S. noctilio*, and if so how might such interactions occur? Field studies were conducted to identify associated insect species from *S. noctilio*-infested pines. The wasp was sometimes found alone in a tree; in most cases it was found with bark and/or cerambycid beetle species, most commonly the pine shoot beetle. I found no sign of intra-tree partitioning

between wasps and beetles, but there was evidence that wood wasps were less abundant, but larger, when beetles were also present. Experiments showed that indirect interactions can occur between the two groups via fungal associates of one or both. In the laboratory, the wood wasp fungal symbiont was outcompeted by two beetle-associated fungi over a range of temperatures. However, under field conditions, the wood wasp was able to detect and avoid ovipositing in areas inoculated with one of these two fungi. These results show that insects co-habiting pine with *S. noctilio* have potential to exert a measure of biological control on this insect.

Interactions entre la guêpe perce-bois introduite, *Sirex noctilio*, les coléoptères perceurs du phloème et du bois compétiteurs, et leurs champignons associés

Sirex noctilio est un ravageur important dans sa distribution d'introduction dans l'hémisphère sud où il cause de la mortalité importante des pins non-natifs. Cependant, dans sa distribution européenne native, *S. noctilio* cause peu de problèmes, peut-être à cause de la communauté bien développée d'insectes vivant sur les pins. Si de telles interactions ont lieu, elles pourraient limiter l'impact de la guêpe perce-bois dans sa nouvelle distribution d'introduction en Amérique du Nord. Mes recherches posent deux grandes questions: 1) Est-ce que *S. noctilio* partage son habitat avec d'autres insectes, et si oui, lesquels? 2) Y a-t-il des signes que les co-habitants affectent *S. noctilio*, et si c'est le cas, comment de telles interactions ont-elles lieu? Des études de terrain ont été conduites afin d'identifier les espèces d'insectes associés sur les pins infestés par *S. noctilio*. La guêpe a parfois été trouvée seule sur un arbre, mais dans la plupart des cas, elle a été trouvée avec des espèces de scolytes ou des longicornes, généralement l'hylésine du pin. Je n'ai trouvé aucun signe de partitionnement à l'intérieur d'un arbre entre les guêpes et les coléoptères, mais il y avait des preuves que les guêpes perce-bois étaient moins abondantes mais plus grandes lorsque les coléoptères étaient également présents. Les expériences ont montré que les interactions indirectes peuvent se produire entre les deux groupes via des champignons associés de l'un ou des deux. Au laboratoire, les symbiotes fongiques de la guêpe perce-bois ont été dépassés par deux champignons associés aux coléoptères sur une large gamme de température. Cependant, dans les conditions de terrain, la guêpe perce-bois a été capable de détecter et d'éviter de pondre dans des régions inoculées par un de ces deux champignons. Ces résultats montrent que les insectes co-habitants avec *S. noctilio* sur le pin ont le potentiel d'exercer une mesure de lutte biologique sur cet insecte.

Joel F. Gibson^{1,2}

¹Agriculture and Agri-Food Canada, CNC, Ottawa, Ontario; ²Biology, Carleton University, Ottawa, Ontario

When Genes and Genitalia Come Together: The Utilization of Both Molecular and Morphological Data in a Systematic Revision of Conopidae (Diptera)

Conopidae is a fascinating family of parasitic flies. Most species are endoparasitoids of bees and wasps as larvae, while members of one subfamily (Stylogasterinae) attack cockroaches and crickets. They are economically and ecologically important as parasitoids of important pollinators. Despite the fact that over eight hundred species have been described, there has been very little phylogenetic and higher-level taxonomic work completed on Conopidae. No phylogeny for the family has been attempted and species concepts are based on external features only. Even placement within Schizophora has been a source of debate. Genitalic and molecular characters have not yet been used to test species or generic concepts. My revision of the family began with a phylogeny of Schizophora recovered from a ten-gene molecular data set. By placing the family in this way, I was able to determine the nearest sister group to Conopidae. Using representatives of this sister group (Lauxaniidae) as outgroup and 64 ingroup taxa from 24 conopid genera, I

generated a five-gene DNA sequence dataset. At the same time, I coded over 150 morphological characters for over 100 conopid species. The combined molecular and morphological data was used to generate a phylogeny of the genera of Conopidae. Parsimony and Bayesian analyses were performed on the complete dataset to produce a preferred phylogenetic hypothesis. All four current subfamilies are recovered as monophyletic with strong support. Also recovered with strong support is the previously proposed subfamily Zotioninae. Stylogasterinae is recovered as sister to the remaining Conopidae.

Quand les gènes et les génitalia vont de paires: l'utilisation des données moléculaires et morphologiques pour la révision systématique des conopidés (Diptera)

Les conopidés sont une famille fascinante de mouches parasitoïdes. La plupart des espèces sont des endoparasitoïdes de larves d'abeilles et de guêpes, alors que les membres d'une sous-famille (Stylogasterinae) attaquent les blattes et les sauterelles. Ils sont importants sur le plan économique et écologique en tant que parasitoïdes de pollinisateurs importants. Malgré le fait que plus de 800 espèces ont été décrites, il y a eu très peu de travaux phylogénétiques et taxonomiques de haut niveau sur les Conopidae. Aucune phylogénie n'a été tentée pour la famille et le concept des espèces se base sur des traits externes seulement. Même le placement au sein de Schizophora a été une source de débats. Les caractères des génitalia et moléculaires n'ont pas été utilisés pour tester les concepts d'espèces ou de genres jusqu'à maintenant. Ma révision de la famille a commencé avec une phylogénie de Schizophora d'un jeu de données moléculaires de dix gènes. En plaçant la famille de cette façon, j'ai été capable de déterminer le groupe sœur le plus proche des Conopidae. En utilisant des représentants de ce groupe sœur (Lauxaniidae) en tant que groupe externe et 64 taxons internes de 24 genres de conopidés, j'ai généré un jeu de données d'une séquence d'ADN de cinq gènes. En même temps, j'ai codé plus de 150 caractères morphologiques de plus de 10 espèces de conopidés. Les données moléculaires et morphologiques combinées ont été utilisées pour générer une phylogénie des genres de conopidés. Les analyses de parcimonie et bayésiennes ont été conduites sur un jeu de données complet afin de produire une hypothèse phylogénétique préférée. Les quatre sous-familles actuelles sont retrouvées comme monophylétiques avec un fort support. La sous-famille Zotioninae a également été retrouvée comme groupe sœur des conopidés restants avec un fort support.

David Jack¹, John McLean¹, Gordon Weetman¹, Colette Breuil²

¹Forest Sciences, University of British Columbia, Vancouver, British Columbia; ²Wood Science, University of British Columbia, Vancouver, British Columbia

“It is not easy being green.” Why fertilizer & climate at the mountain pine beetle range limit did not stop the epidemic

This four year study examined the response of recent mountain pine beetle attack to fertilizer treatments in a mature mixed species Montane Spruce forest in the Southern Interior Forest Region of British Columbia. The study area was situated near the limit of the beetles' climatic (elevation) range. Over 5000 lodgepole pine trees were monitored in thirty 40m x 40m plots and in the fall of 2006, ten replications of three fertilizer treatments (0, 200, and 400 kg N/ha) were randomly applied. Brood development and success was monitored on every attacked tree. The mature tree responses to the fertilizer treatments were assessed by evaluating the nitrogen concentrations in both phloem and needles. Tree cores have been used to assess tree vigour of mountain pine beetle attacked trees in the fertilized plots. Climatic data collected at the site and within the phloem was used to investigate how degree days affect the lifecycle of the beetle during multiple attack periods. By the second year after fertilization the 400 Kg N/ha treatment resulted in a significant dynamic wound response in the lodgepole pine trees. At

the end of four years the increased tree defences were no match for the immigrating beetles arriving early in the summer from the lower elevation epidemic. The earlier arrival permitted the beetles to move from a hemivoltine to a univoltine life cycle. At the end of four years the majority of the pine component within all plots had succumbed to the beetle pressure proving once again, "it's not easy being green."

"C'est pas facile d'être vert." Pourquoi les fertilisants et le climat dans la limite de distribution des dendroctones du pin n'ont pas pu arrêter l'épidémie

Cette étude de quatre ans a examiné la réponse des récentes attaques de dendroctones du pin aux traitements de fertilisants dans une forêt mature mixte de la zone montagneuse de l'épicéa dans la région de Southern Interior en Colombie-Britannique. L'aire de l'étude était située près de la limite de la distribution climatique (élévation) des coléoptères. Plus de 5 000 pins tordus ont été surveillés dans trente parcelles de 40 m x 40 m et, durant l'automne 2006, dix répétitions de trois traitements de fertilisants (0, 200 et 400 kg N/ha) ont été appliqués. Le développement et le succès de la progéniture ont été surveillés pour chaque arbre attaqué. La réponse des arbres matures aux traitements de fertilisants a été évaluée par les concentrations en azote dans le phloème et les aiguilles. Les carottes d'arbres ont été prélevées pour évaluer la vigueur des arbres attaqués par le dendroctone du pin dans les parcelles fertilisées. Des données climatiques ont été collectées sur le site et dans le phloème et utilisées pour examiner comment les degrés-jours affectent le cycle de vie du dendroctone durant des périodes d'attaques multiples. À la seconde année après les traitements de fertilisation à 400 kg N/ha, une réponse dynamique significative aux blessures a été observée chez les pins tordus. À la fin des quatre ans, les défenses augmentées des arbres étaient trop faibles pour résister aux dendroctones immigrants arrivant d'épidémies de plus faible altitude tôt durant l'été. L'arrivée hâtive a permis aux dendroctones de passer d'un cycle de vie hémivoltin à univoltin. À la fin des quatre ans, la majorité des pins dans chaque parcelle avait succombé à la pression des dendroctones, démontrant encore une fois que "c'est pas facile d'être vert".

Christopher J. Borkent, Terry A. Wheeler

Natural Resource Sciences, McGill University, Ste-Anne-de-Bellevue, Québec

Systematics of *Leptomorphus* and the phylogeny of the tribe Sciophilini (Diptera: Mycetophilidae).

The Mycetophilidae, or fungus gnats, is a diverse family of Diptera with over 4100 species in 135 genera. They are a dominant insect group in moist habitats, particularly forests, where they play a major role in decomposition of fungi and wood. Recent phylogenetic work on the Mycetophilidae provides good support for the monophyly of the subfamily Mycetophilinae and its two tribes, but the monophyly of the four tribes in the other subfamily, the Sciophilinae, remains uncertain. One of the five largest genera in the tribe Sciophilini is *Leptomorphus* Curtis, which is found worldwide except in Australasia and Antarctica. The genus currently contains 28 extant species in four subgenera, and has no hypothesis of phylogenetic relationships. Here I report the results of a worldwide revision of this genus, along with a phylogeny of the species relationships. Sixteen new species were discovered and the resulting change to the biogeographic distribution of the genus is discussed. A dataset of adult morphological characters was analyzed, using parsimony, to reconstruct a phylogeny of the species relationships. This yielded a number of monophyletic species-groups, and called into question the validity of the subgenera and some species synonymizations. I also used morphological characters to explore the phylogeny of the tribe Sciophilini, which currently contains ~540 species in 38 genera. I present the first phylogeny including all genera

assigned to the tribe. The resulting relationships between the genera and the taxonomic limits of both the tribe and the genera are discussed. The new information from these studies will require changes to the mycetophilid classification.

Systématique de *Leptomorphus* et phylogénie de la tribu Sciophilini (Diptera: Mycetophilidae)

Les Mycetophilidae, ou mouches des terreaux, forment une famille diverse de diptères avec plus de 4100 espèces réparties dans 135 genres. Ils forment un groupe d'insectes dominants dans les habitats humides, particulièrement en forêt, où ils jouent un rôle majeur dans la décomposition des champignons et du bois. De récents travaux phylogénétiques sur les mycetophilidés fournit un bon support pour la monophylie de la sous-famille Mycetophilinae et ses deux tribus, mais la monophylie des quatre tribus dans l'autre sous-famille, les Sciophilinae, demeure incertaine. Un des cinq plus grands genres de la tribu Sciophilini est *Leptomorphus* Curtis, qui est présent mondialement sauf en Australie et en Antarctique. Le genre contient 28 espèces réparties dans quatre sous-genres, et il n'y a aucune hypothèse de relations phylogénétiques. Je présente ici les résultats d'une révision mondiale de ce genre, ainsi qu'une phylogénie des relations entre espèces. Seize nouvelles espèces ont été découvertes et le changement résultant sur la distribution biogéographique du genre est discuté. Un jeu de données de caractères morphologiques adultes a été analysé, par parcimonie, afin de reconstruire la phylogénie des relations entre espèces. Ceci a produit un nombre de groupes d'espèces monophylétiques, et a remis en question la validité du sous-genre et de quelques synonymies d'espèces. J'ai également utilisé des caractères morphologiques afin d'explorer la phylogénie de la tribu Sciophilini, qui contient actuellement 540 espèces réparties dans 38 genres. Je présente la première phylogénie incluant tous les genres assignés dans cette tribu. La relation résultante entre le genre et les limites taxonomiques de la tribu et du genre sont discutés. Les nouvelles informations fournies par ces études vont exiger des changements dans la classification des mycetophilidés.

President's Prize winners at the 2010 JAM

President's Prize awards for the best oral presentations were given to:

Jaclyn Scott (Carleton University): 'The evolution of ritualized vibration-mediated territoriality in caterpillars (Drepanidae)', co-authored by J.E. Yack (Acoustics and Chemical Ecology Session)

Amy Nixon (University of Alberta): 'Experimental assessment of predation and parasitism on forest tent caterpillar', co-authored by J. Roland (Forestry Session)

Cristina Machial (University of British Columbia): 'Essential oils and their potential for the control of *Choristoneura rosaceana*, *Trichoplusia ni*, *Dysaphis plantaginea*, and *Myzus persicae*', co-authored by M. Isman (Agriculture Session)

Nathan Woodbury (Simon Fraser University): 'Firebrats (*Thermobia domestica*) deposit and respond to microbial aggregation signals', co-authored by G. Gries (Chemical Ecology, Behaviour and Reproduction Session)

Marla Schwarzfeld (University of Alberta): '*Ophion* (Ichneumonidae) of western Canada: Molecules, morphology and species delimitation in a taxonomically challenging genus', co-authored by F.A.H. Sperl (Ecology, Biodiversity and Systematics Session)

Sandra Gillespie (University of Massachusetts): 'Do parasites of bumble bees impact pollination service?' (Biological Control and Pollination Session)

The President's Prize for the best poster was awarded to:

Kurt Illerbrun (University of Alberta): 'Host finding by late-instar *Parnassius smintheus* larvae', co-authored by J. Roland.



Dezeme Huber

President's Prize winners. back row (from left): Sandra Gillespie, Kurt Illerbrun, Amy Nixon; front row (from left): Cristina Machial, Marla Schwarzfeld, Jaclyn Scott. Not in picture: Nathan Woodbury.

ESC 2010 student award winners / Gagnants des prix étudiants SEC 2010

Fourteen applications were received for the **Ed Becker Conference Travel Award**. Awards were made to the following: **Leah Flaherty**, University of New Brunswick (Effect of top-down and bottom-up factors on the performance of the exotic brown spruce long-horn beetle in Nova Scotia), **Jaclyn Scott**, University of Ottawa (The evolution of ritualized vibration-mediated territoriality in caterpillars [Drepanidae]), and **Geoff Williams**, Dalhousie University (Colony collapse disorder in context).

The 2010 **Borden Scholarship** was awarded to **Lars Andreassen**, University of Manitoba. Lars' research is about whether the introduction of a European natural enemy can be successfully integrated with existing management strategies for control of the cabbage maggot, *Delia radicum* (Diptera: Anthomyiidae), in Canadian canola crops. He is evaluating direct and non-target impacts of the beetle *Aleochara bipustulata* (Coleoptera: Staphylinidae), whose larvae develop as parasitoids of cabbage maggot pupae, and whose adult stage is known to consume *D. radicum* eggs and larvae.

The recipient of the **Biological Survey of Canada Award** was **Joel Gibson**, Carleton University. Joel is working on the phylogeny of Conopidae, a family of flies that are primarily endoparasites of wasps and bees. In addition to his work on the phylogeny he is conducting research on the life history and faunistics of Conopidae.

Elisabeth H. Frost, Acadia University, was the recipient of the **MSc Scholarship**. Elisabeth is studying learning and memory of honeybees using the Pavlovian insect learning paradigm (proboscis extension reflex [PER]) that mimics learning in the natural environment. She is evaluating the impact on PER of Apistan an insecticide that is commonly used to control Varroa mites.

The **PhD Scholarship** was awarded to **Geoff Williams**, Dalhousie University, who studies microsporidian parasites of honey bees. Geoff will survey commercial honey bee operations in Nova Scotia for *N. ceranae*, a new, invading species of microsporidia; investigate the effects of Fumagilin-B® on *N. ceranae* and colony strength; investigate colony-level and individual-level effects of *N. ceranae*; and investigate interactions between *N. apis* and *N. ceranae* during co-infection.

Haley Catton, University of British Columbia – Okanagan, received the 2010 **Graduate Research Travel Scholarship**. Haley will go to Australia to work with Dr Yvonne Buckley to learn modeling. Her thesis is titled “Analyzing, modeling and predicting population-level impacts of the biological control agent *Mogulones crucifer* (Coleoptera: Curculionidae) on its target weed, houndstongue (*Cynoglossum officinale*, Boraginaceae), and the confamilial, native, nontarget plant, blue stickseed (*Hackelia micrantha*)”.



Rick West

Recipients of the Ed Becker Conference Travel Award: (from left) Jaclyn Scott, Leah Flaherty, and Geoff Williams.



Rick West

More student award winners: (from left) Lars Andreassen (Borden Scholarship), Geoff Williams (PhD Postgraduate Scholarship), and Joel Gibson (Biological Survey of Canada Scholarship).

Applying for ESC Scholarships and Awards

The deadline for next year's Entomological Society of Canada of Scholarships and Awards will be **21 February 2011**.

The 2011 awards will include (1) two post-graduate awards, one for an MSc student and one for a PhD student, (2) the Biological Survey of Canada Scholarship for a student studying insect or arthropod biodiversity, (3) the John Borden Scholarship for a student in a post-graduate program in integrated pest management, and (4) two Graduate Research Travel Scholarships to assist students to travel to do research or course work that could not be done at their own university.

Obtain details on the awards, eligibility and application procedures from the Entomological Society of Canada website – Student Affairs page (<http://www.esc-sec.ca/studentawards.html>).

Applications are to be submitted as .pdf files through e-mail. When applying please make certain that all of the requested materials are submitted and in the order requested. Letters from referees are to be submitted separately by e-mail but make certain that you follow up with your referees to confirm that they have submitted the letters.

Applications for the Ed Becker Conference Travel Award will be accepted later in the year and will have the same deadline as that for abstract submissions for next year's meeting in Halifax.

Judith Myers
Scholarship Committee Chair
E-mail: myers@zoology.ubc.ca

Canadian Forum for Biological Control/ Forum canadien sur la lutte biologique

Pssst.....Hey students, wanna win \$200?

The Canadian Forum for Biological Control (CFBC) has established a new award for students working in the area of biological control. Students who have presented a biocontrol related poster at a national or regional conference in Canada during 2010 are eligible to enter their poster to be considered for this \$200 prize.

It's easy! Just e-mail your poster (PDF format only, please), along with the name, location and dates of the meeting at which it was presented to the CFBC Secretary, Dr Gary Peng (gary.peng@agr.gc.ca), by 31 January 2011.

Criteria being evaluated will include presentation and organization, scientific content and your understanding of the implications of the work. The winner will be notified and announced in early spring, 2011.

Not sure if you are eligible? If you are in a registered degree (undergraduate or graduate) or diploma program, or graduated from the program within the previous calendar year (i.e. 2010), you can enter your poster (you must be first author) to win the CFBC prize money, and bragging rights for a whole year!

Don't know what the CFBC is? We are a nation-wide organization committed to researching and promoting the use of biological control for pest management. In addition to this annual student poster prize, the modest \$20 annual fee for members supports the symposia which we organize frequently at national meetings such as the Annual Meetings of Entomological Society of Canada and the Canadian Phytopathological Society. For more information, please contact Gary Peng, or Leslie Cass, President of the CFBC (leslie.cass@agr.gc.ca).

Pssst..... Eh, les étudiants, voulez-vous gagner 200\$?

Le Forum canadien sur la lutte biologique (FCLB) a créé un nouveau prix pour les étudiants qui oeuvrent dans le domaine de la lutte biologique. Les étudiants qui ont présenté une affiche sur la lutte biologique à une conférence nationale ou régionale au Canada durant 2010 peuvent la mettre en candidature en vue de gagner ce prix de 200\$.

C'est facile! Envoyez simplement par courriel votre affiche (en format PDF seulement, s.v.p.), ainsi que le nom, le lieu et les dates de l'événement où elle a été présentée, au secrétaire du FCLB, le Dr Gary Peng (gary.peng@agr.gc.ca), d'ici le 31 janvier 2011. Les critères évalués seront la présentation et l'organisation, le contenu scientifique et ce que vous comprenez des conséquences du travail. Le gagnant sera informé et annoncé au début du printemps 2011.

Vous n'êtes pas sûr d'être admissible? Si vous êtes inscrit à un programme menant à un grade (premier ou deuxième cycle) ou à un diplôme ou que vous avez obtenu un diplôme de ce programme durant l'année civile précédente (c.-à-d. 2010), vous pouvez présenter votre affiche (vous devez en être l'auteur principal) pour gagner le prix monétaire du FCLB et le droit de vous en vanter pendant une année entière!

Vous ne savez pas ce qu'est le FCLB? Nous sommes une organisation nationale engagée dans la recherche et la promotion de la lutte antiparasitaire en utilisant des moyens biologiques. En plus de ce prix annuel récompensant l'affiche créée par un étudiant, les frais d'adhésion annuels modestes de 20 \$ réclamés aux membres financent les symposiums que nous organisons fréquemment lors de réunions nationales, comme les réunions annuelles de la Société d'entomologie du Canada et de la Société canadienne de phytopathologie. Pour obtenir de plus amples renseignements, veuillez communiquer avec Gary Peng ou Leslie Cass, présidente du FCLB (leslie.cass@agr.gc.ca).

VIIth International Conference on Arthropods: Chemical, Physiological, Biotechnological and Environmental Aspects. (Stefan Kopeć Memorial Conference)

Białka Tatrzańska near Zakopane, Poland, 18-23 September 2011

<http://VIIarthropods.stud.wchuwr.pl>

Sixth International Symposium on Molecular Insect Science

NH Grand Krasnapolsky, Amsterdam, The Netherlands, 2-5 October 2011

www.molecularinsectscience.com/index.html

Joint Annual Meeting of the Entomological Society of Canada and the Acadian Entomological Society

Halifax, Nova Scotia, 6-9 November 2011

59th Annual Meeting of the Entomological Society of America

Reno-Sparks Convention Center, Reno, Nevada, 13-16 November 2011



Steve Marshall

A funnily proportioned family of flies: the acrocerids, here represented by the rarely collected *Pterodontia flavipes*.

Diversity of gall wasps (Hymenoptera: Cynipidae) on bur oak (*Quercus macrocarpa* Michx.) in southern Manitoba

Scott Digweed

Gall formation is a physiological response by a host plant to a specialized form of attack by a gall-inducing species. The resulting gall structure that surrounds the gall inducer on the host plant confers advantages on the inducer, including protection from predators and abundant food (Ananthakrishnan 1984). Unsurprisingly, these advantages have attracted an array of guests (or inquilines) and parasites that inhabit galls without having to induce them.

Gall induction has evolved in several insect orders, including the Hymenoptera, wherein the family Cynipidae (gall wasps) is comprised exclusively of gall formers (Tribe Cynipini) and inquilines or parasitoids of cynipid galls (Tribe Synergini) (Burks 1979; Nieves-Aldrey 2001). There are 1360 described cynipid species worldwide (Liljebld and Ronquist 1998; Ronquist 1994). Most species (almost 1000 worldwide) attack oaks (Fagaceae: *Quercus* spp.), and in North America there are over 485 described species of oak-galling cynipids (Burks 1979; Melika and Abrahamson 2002). The galls produced by these wasps are morphologically diverse, often structurally complex, and host large communities of other insects that live in them or attack their occupants (Askew 1984; Meyer 1987; Stone and Schönrogge 2003). These communities consist of cynipid inquilines and/or parasitoids (from the Tribe Synergini) and chalcidoid parasitoids (Askew 1984).

Despite the fact that many species of oak gall wasps have been described in North America, they are still taxonomically and biologically poorly understood (Pujade-Villar et al. 1999). The main reason for this is the peculiar life history of most oak-galling cynipids: they are obligately bivoltine, with adult males and females of the “sexual” generation (denoted by “♂♀” after the species name) active in early summer, and adults of the female-only “agamic” generation (denoted by “♀”) active in late fall or early spring. Further, the two generations of a single oak-galling cynipid species often have morphologically different galls and adult wasps. The prevalence of alternating generations in oak gall wasps was not understood when most species were described. As a result, almost all species were originally described from only one generation, and in an unknown number of cases, the two generations of a single species have been described as separate species. Today, the most basic biological information is lacking for most species of North American oak-galling cynipids (Pujade-Villar et al. 1999), and nothing is known of their inquilines and parasitoids.

As an example, consider the life cycle of *Disholcaspis quercusmamma* (Walsh), the rough bulletgall wasp. The galls of the agamic generation of this species are common on bur oak (*Quercus macrocarpa* [Michx.]) in central and eastern North America. The large, woody twig galls of the agamic generation occur in clusters on the current year’s twig growth (Figure 1). As these galls develop, they secrete honeydew that attracts ants and vespids (Bequaert 1924). In October or November, the adult female insects of the agamic generation chew exit holes in

Scott Digweed (sdigweed@shaw.ca) owns and operates Midwinter Consulting Inc., a business and scientific consulting company in Edmonton. He is currently helping the Alberta Ministry of Environment implement a new hydrometric application and database. Scott has studied the ecology of birch-leafmining sawflies and carabid beetles, and maintains a keen interest in chalcidoid and cynipoid Hymenoptera.



Scott Digweed

Figure 1. Twig galls of *Disholcaspis quercusmamma* (Walsh) ♂ on bur oak, *Quercus macrocarpa* Michx. Galls are green and soft in summer (left) but turn brown and woody in autumn (right).

their galls, emerge, and lay eggs in bur oak buds. The following spring, these eggs hatch, and the resulting larvae induce tiny, white, egg-shaped galls on the developing shoots (Figure 2). These inconspicuous galls produce male and female gall wasps in May or June. After mating, the females oviposit along developing long shoots on bur oak. These eggs give rise to the twig galls of the agamic generation later in the summer. Although the tiny bud galls of the sexual generation harboured few parasitoids in my rearings, the large twig galls of the agamic generation are inhabited by the cynipid inquiline/parasitoid *Synergus duricoria* Gillette, and a variety of chalcidoids, including *Eurytoma querciglobuli* (Fitch). However, the trophic relationships in this gall-inhabiting community are not known.



Scott Digweed

Figure 2. Spring bud gall of *Disholcaspis quercusmamma* (Walsh) ♂♀ on bur oak, *Quercus macrocarpa* Michx.

At the moment, the details of the life cycle of *D. quercusmamma* remain unpublished. All species in this genus were described (see references in Burks 1979) or revised (Beutenmüller 1909) from the agamic generation only. A recent study of this species by Eckberg and Cranshaw (1994) failed to detect a spring generation that has since been co-discovered by the author and a colleague at Colorado State University. Careful and patient segregation and caging of cynipids on host plants (e.g., Folliot 1964), and/or molecular study of suspected conspecifics (e.g., Stone et al. 2008) is required to explicitly link alternate gall-inducing generations of North American Cynipidae.

This study sought to reveal the diversity of oak gall wasps, their inquilines and parasitoids on bur oak in southern Manitoba. Bur oak is the most widespread native “white” oak (i.e., *Quercus* section *Quercus*) in Canada (Farrar 1995). Bur oak stands in southern Manitoba occur at the extreme northwest edge of this

species' native range (Harms 2002). Nothing is known about the cynipid galls and their community of associated insects in these northern bur oak stands. Twenty-seven species of oak gall wasp have been recorded from bur oak in North America (Table 1), but none of these species have been recorded in the literature from Manitoba (Burks 1979). Although parasitoids have been reared from cynipids in Canada (Peck 1963), the diversity of inquilines and parasitoids attacking cynipids galling bur oak in Manitoba is unknown.

This study began in 2004 in Riding Mountain National Park (RMNP) (Digweed 2005, 2006), but was extended during 2004-2008 to include bur oaks throughout southern Manitoba. Galls were generally collected in late August, when all galls of the current year are mature but detachable galls have not yet dropped off trees. This approach hampered rearing of inhabitants from sexual generation galls, which form and generally produce adult insects in June or July. In 2004, some galls were also collected in April and July. Oaks examined included those easily accessible from public roads and in public parks. In RMNP during 2004, all stands surveyed were along the eastern park boundary. At all locations, above-ground plant parts of trees were searched extensively, and galls were collected up to 6 m above the ground using a pole pruner. Root galls were not sampled, although root-galling species may occur in Manitoba (Table 1). Representatives of all gall species found were collected, placed in labelled plastic Ziploc bags, and retained to rear gall occupants under ambient outdoor conditions in Edmonton, Alberta. Most reared inquilines and parasitoids have been identified to at least genus.

So far, 20 species of oak-galling cynipids have been found on bur oaks in southern Manitoba (Table 1). This diversity represents 75% of the total oak-galling cynipid fauna recorded from bur oak throughout North America, and 83% of the 24 species expected on above-ground plant parts.

To the end of 2009, 6691 insects had been reared from all gall species collected in Manitoba. Of these, 2780 were gall makers; the remainder were inquilines or parasitoids from the cynipoid genera *Ceroptres* and *Synergus* (Cynipidae: Synergini) and the chalcidoid genera *Ormyrus* (Ormyridae), *Eurytoma*, *Sycophila* (Eurytomidae), *Brasema* (Eupelmidae), *Pteromalus*, *Gastrancistrus?* (Pteromalidae), *Torymus* (Torymidae), *Closterocerus* (Eulophidae: Entedoninae), *Aulogymnus* (Eulophidae: Eulophinae), *Quadrastichus*, *Aprostocetus* (*Aprostocetus*), *Aprostocetus* (*Quercastichus*), and *Baryscapus* (Eulophidae: Tetrastichinae). A few dipteran inquilines from the Cecidomyiidae genus *Lasioptera* were also reared.

This study showed that a large proportion of the gall wasp species ever reared from bur oak is present in Manitoba, at the extreme northwest limit of bur oak's native range. Some of the oak-galling cynipids will represent new published records for Canada, and all will represent new published records for Manitoba. These galls support a diverse array of inquiline or parasitoid insects, most of which specialize on oak-galling hosts (e.g., *Ceroptres* and *Synergus*) and are therefore completely dependent on them for survival.

Currently, rearings from galls collected during 2004-2008 are mostly complete (some gall wasp species, such as *Philonix fulvicollis* Fitch, remain in their galls for 2 or more years before emerging). Publication of an annotated checklist of oak-galling cynipids in Manitoba is planned, as are papers documenting new alternate generations in the cynipid species studied. A description of the sexual generation adults and galls of *D. quercusmamma* is currently being written in collaboration with Colorado State University student Crystal McEwen. In addition, representative gall-inducing cynipids and parasitic chalcidoids reared during this study have been contributed to a molecular study led by Graham Stone and James Nicholls (University of Edinburgh, UK) examining species' identities and relationships in cynipid galls worldwide.

Our understanding of the insect community in cynipid galls on bur oak in Manitoba is rudimentary. Most gall wasps on bur oak still have unknown (or unpublished) alternate generations (Table 1), and the trophic relationships between these gall wasps and the other insects reared

Table 1. The 27 species of oak gall wasp (Hymenoptera: Cynipidae) recorded from bur oak (*Q. macrocarpa*) by Felt (1940), Weld (1959) or Burks (1979), along with the type of gall produced by each generation (if known). Undescribed species mentioned by Weld (1959) associated with bur oak have not been included. Species with an asterisk (*) have been recorded from Canada (according to Burks [1979] and Kinsey [1923, 1930]). None of these species have been recorded from Manitoba in the literature.

Species	Sexual gall	Agamic gall	In Manitoba?
<i>Acraspis macrocarpae</i> Bassett* ¹	bud scale ²	leaf	✓
<i>Acraspis villosa</i> Gillette	bud scale ²	leaf	✓
<i>Andricus chinquapin</i> (Fitch)	leaf	?	✓
<i>Andricus dimorphus</i> (Beutenmueller)	leaf	?	✓
<i>Andricus foliaformis</i> Gillette	leaf	?	✓
<i>Andricus ignotus</i> (Bassett)	new shoot ²	leaf	✓
<i>Andricus pisiformis</i> Beutenmueller	bud	?	✓
<i>Andricus quercusfrondosus</i> (Bassett)	?	bud	✓
<i>Andricus quercuspetiolicola</i> (Bassett)	leaf petiole	?	✓
<i>Andricus quercusstrobilanus</i> (Osten Sacken)*	?	petiole base	✓
<i>Callirhytis flavipes</i> (Gillette)	leaf midrib	coarse twig bark ²	✓
<i>Callirhytis glandulus</i> (Beutenmueller)	?	acorn cup	✓
<i>Callirhytis quercusfutilis</i> (Osten Sacken)	leaf	root	✓
<i>Disholcaspis bassetti</i> (Gillette)	?	new twig	
<i>Disholcaspis quercusmamma</i> (Walsh)	new shoot ²	new twig	✓
<i>Holocynips badia</i> (Bassett)	?	root	n/a
<i>Holocynips maxima</i> (Weld)	?	root	n/a
<i>Loxaulus illinoisensis</i> (Weld)	?	root	n/a
<i>Neuroterus fugiens</i> Weld	leaf	?	
<i>Neuroterus niger</i> Gillette ³	new shoot ²	leaf	✓
<i>Neuroterus quercusverrucarum</i> Osten Sacken*	leaf ²	leaf	✓
<i>Neuroterus saltarius</i> Weld	?	leaf	✓
<i>Neuroterus umbilicatus</i> Bassett*	?	leaf	✓
<i>Neuroterus vescicula</i> (Bassett)	?	bud	
<i>Philonix fulvicollis</i> Fitch* ⁴	bud ²	leaf	✓
<i>Phylloterus volutellae</i> (Ashmead)	?	leaf	
<i>Trigonaspis quercusforticorne</i> (Walsh)	?	new stem or leaf	✓

¹Includes references to *Acraspis gemula* (Bassett) ♂♀ and *Acraspis hirta* (Bassett) ♂ (and varieties within the latter species) which are treated here as synonymous with *A. macrocarpae* ♂♀ and ♂ on bur oak.

²This alternate generation has been experimentally determined by the author, but awaits description.

³Includes references to *Neuroterus vernus* Gillette ♂♀, which is the alternate generation of *N. niger* ♂ (unpublished data).

⁴Includes references to *Philonix gigas* (Weld) ♂, *Philonix insulensis* (Kinsey) ♂, and *Philonix nigra* (Gillette) ♂, which are treated here as synonymous with *P. fulvicollis* ♂ on bur oak.

from their galls are not understood. For example, it is not clear which Synergini and chalcidoid species are guests, feeding on gall tissue, and which are parasitoids. Further, it is not known which species survive if multiple parasitoid or inquiline species are competing for hosts or space within a single gall. Elucidating these relationships will take much additional, detailed work, but the rewards are great. Well-studied oak-galling cynipids in Europe are model systems for studying fundamental questions in evolution and ecology (Stone et al. 2002; Stone and Schönrogge 2003). Similarly complex and interesting questions could be addressed here if the more diverse North American cynipid fauna was also understood at a basic biological level.

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Call for interest in the Editor-in-Chief position for *The Canadian Entomologist*

The Entomological Society of Canada is seeking an Editor-in-Chief for *The Canadian Entomologist* as of October 2011. The Editor-in-Chief of *The Canadian Entomologist* serves as one of the trustees of the Entomological Society of Canada (ESC) and is responsible for the scientific and editorial integrity of *The Canadian Entomologist*. The ESC executive is keen to hear from members who might be interested in this exciting and challenging position. We are in the process of changing publishers and the new Editor-in-Chief will have an important role in this transition period. For further questions regarding this position or for suggestions of potential candidates, please contact ESC President Peter Mason (see inside back cover for contact information).

Appel d'intérêt pour le poste de rédacteur en chef pour *The Canadian Entomologist*

Il y aura une ouverture pour le poste de rédacteur en chef pour *The Canadian Entomologist* en octobre 2011. Le rédacteur en chef de *The Canadian Entomologist* fait partie des fiduciaires de la Société d'entomologie du Canada (SEC) et est responsable de l'intégrité scientifique et éditoriale de *The Canadian Entomologist*. Le comité exécutif de la SEC est prêt à entendre les membres qui pourraient être intéressés par ce poste excitant et plein de défis. Nous sommes sur le point de changer de maison d'édition et le nouveau rédacteur en chef aura un rôle important durant cette transition. Pour plus d'information concernant le poste ou pour des suggestions de candidats potentiels, veuillez contacter le président de la SEC, Peter Mason (voir à l'intérieur de la couverture arrière pour ses coordonnées).



Fireflies, Honey, and Silk. Waldbauer, G. 2009. University of California Press, Berkeley. xii + 234 pp. ISBN 978-0-520-25883-9, US\$40.00, Hardcover.

As something of a giant silkworm enthusiast, I have been familiar with some of Gilbert Waldbauer's primary research for many years. That interest, combined with my own academic work on seasonal adaptations of certain arthropods, led me to read Waldbauer's 1996 book *Insects Through the Seasons*, a narrative centred around the life cycle of the cecropia moth (*Hyalophora cecropia*, Saturniidae). In that work, the story not only describes the adaptations that enable the cecropia moth to successfully complete each stage of its life cycle, but also frequently diverges to include the respective adaptations of a wide variety of other insects along the way. Having been suitably impressed with that book at the time, I jumped at the recent opportunity to review this one.

This book is divided into 10 chapters plus a brief Introduction and a somewhat longer Epilogue. The Introduction begins with an account of the seminal childhood experience that stimulated Waldbauer's fascination with insects and then proceeds to set the stage for the chapters that follow. The bulk of the book describes in some detail the variety of ways in which insects and their products have been utilized by humans, or have otherwise benefitted humankind in a direct way. The Epilogue provides a taste of the much broader and more complex roles of insects in an ecological context and struck me as harbouring the hope that those not already indoctrinated will go on to learn more.

Beginning with **Insects People Like**, Waldbauer discusses such obvious examples as butterflies and ladybird beetles before moving on to some less obvious and even downright surprising ones. I won't spoil the surprise by listing all the types of insects included in this chapter, but I will say that each is justified and the information provided to justify its selection is very interesting.

The next three chapters are devoted to insects' contributions to what people wear. **The Silk We Wear** is devoted largely to a single insect, the true silkworm (*Bombyx mori*), and traces the history of its domestication as well as describing its biology and the industry of producing silk. One fascinating aside recounts how the domesticated silkworm's greatest contribution to humanity arose only incidentally to the production of silk! Some of the ways in which silk is used by a wide variety of other arthropods are briefly noted, and other sources of silk that have been utilized by humans are also described, mainly "wild silks" produced by members of the lepidopteran families Saturniidae and Lasiocampidae. **Dyeing the Cloth** is done, of course, with dyes derived from insects. Foremost among these was the rich red dye derived from the cochineal scale insect, which was in use by the Aztecs when the Spanish invaded the New World in the early 1500s. Waldbauer details how this discovery grew into a world-wide industry, with dried cochineal insects nearly worth their weight in gold, before being largely supplanted by synthetic dyes in the mid to late 1800s. **Baubles, Bracelets, and Anklets**, as well as a wide variety of other decorative items, have been and continue to be made from insects or their parts all over the world.

The next two chapters describe various useful materials made by or derived from insects, directly or indirectly, beginning with the traditional sources of **Candles, Shellac, and Sealing Wax** (the last being a mixture of the beeswax and lac, respectively, used to make the first two) and detailing the various uses to which these materials have been put. **Paper and Ink** describes how paper is made by colonial wasps to construct their nests, which may have been the inspiration for the origin of paper-making by humans, and how very high quality inks are derived from plant galls caused by insects. One very small point that I have to rebut is the assertion that in German the same word is used for both “book” and “beech” tree. They may well have derived from the same origin, as described in this chapter, but I have it on very good authority that no German would consider the words for book (*Buch*) and beech (*Buche*) to be the same!

The next three chapters document the benefits, both real and imagined, of the use of insects for food and medicine. **Butterflies in Your Tummy** might describe the sensation experienced by many people in our culture when presented with the mere thought of insects as food. The author recounts his own experience of discovering (reluctantly) that properly prepared insects can be quite palatable, if not downright tasty! Briefly noted are the nutritional qualities of insects and the near impossibility of maintaining a diet completely devoid of insects. Then, Waldbauer broadly surveys some of the wide variety of insects that have been intentionally included in the diet of many human cultures around the world. Perhaps more appealing to the average palate, honey has been the main way of **Satisfying the Sweet Tooth** for humans throughout most of our history. Of course, beekeeping and the production of honey by domestic honey bees is described in some detail, but also included is the use by various cultures of the honey produced by wild bees, honeypot ants, and even certain wasps, as well as the honeydew produced by some sap-sucking insects. Waldbauer debunks many **Cures and Nostrums** based on insects as arising from pure ignorance or misguided analogies, but also confirms that some such remedies are indeed effective. Examples of the latter include the antibacterial properties of honey and the use of ant mandibles as sutures and blow fly maggots to clean and disinfect wounds.

The final chapter provides an account of several types of **Insect Pets and Performers**, beginning with a discussion of crickets, both as singers and as fighters, and finishing up with some of the remarkable feats to be seen in the classic flea circus.

Each chapter ends with a paragraph that provides a segue to the topic of the following chapter. Simple black and white illustrations, very finely rendered by James Nardi, are used sparingly (there is a total of 21) but effectively throughout the 10 chapters. The book is well referenced with publications ranging from general monographs to primary scientific literature published throughout the last two centuries. The references are grouped by chapter, rather than being listed in a single bibliography, which may make them a little easier to find but also leads to some redundancy – I noticed a few references cited in several different chapters and hence included in several different reference lists. Interestingly (in a good way), the references are not cited in the formal scientific style but rather the citations are integrated seamlessly into the narrative of the text.

The text is very well written. I find Waldbauer’s style quite engaging and easy to read. On a related note, I was happy to see the “Oxford comma” (that bit of punctuation that is generally considered optional, all too often to the detriment of clarity) consistently used, even in the title! Being a consummate picker of nits, I am usually dismayed by the typographical and other errors of spelling, grammar, and punctuation that I notice in almost every publication of any kind that I read. This book is almost completely devoid of such errors. In fact, I noted only two – one instance of a singular noun (“insect” no less!) that should have been plural and one sentence wherein a (non-Oxford) comma is missing, causing confusion on first reading (I wondered what on earth “Egyptian papyri honey” was before rereading the sentence a couple of times).

All in all, this book is a delightful tour of the various ways in which insects and their products have benefitted humankind throughout our history. It is packed full of fascinating details, entertaining anecdotes, and informative divergences to related side-topics. Although I was already familiar with

many of the topics covered, I was pleasantly surprised to learn how much more there was to the story in most cases. I would heartily recommend this book to anyone, particularly those lacking an appreciation for insects, but also to the most experienced entomologist – I'm sure even they might find some new insight into a topic with which they thought they were familiar!

Incidentally, for those on a budget or who prefer something lighter than a hardcover book (although even the hardcover is a nice compact volume with its 15 x 20 cm format), a paperback edition (US\$17.95) is due to be published in December 2010 and the work is also available as an Adobe E-Book (US\$14.00) through the University of California Press website (www.ucpress.edu).

Dean Morewood
Pest Management Regulatory Agency
Ottawa



Arthropod Fauna of the United Arab Emirates, Volume 3. Antonius van Harten (Editor). (UAE Insect Project). 2010. Multiply Marketing Consultancy Services. Abu Dhabi (United Arab Emirates). 700 pages. ISBN 978-9948-15-616-1. Approximate prices: 100 EA Dirhams, 65 US\$, 45 €, 38 UK£. (Available from Dar Al Ummah Printing, Publishing, Distribution & Advertising; P.P. Box 39975. Abu Dhabi, United Arab Emirates). info@daralummah.ae

Volume 3 of the *Arthropod Fauna of the United Arab Emirates* was published in March 2010. It is dedicated to two recently deceased colleagues: Wilhelm Büttiker, pioneer of modern faunistic studies on the Arabian Peninsula, and Luigi Magnano, collaborator on the UAE-faunistic studies.

The United Arab Emirates is situated in the east of the Arabian peninsula at the entrance to the Persian Gulf and has an area close to 84 000 km². Until recently, its entomofauna was very little known, but now it is becoming one of the best inventoried in

the region and in most of the world, thanks to the work carried out by a large group of taxonomists under the coordination of Dr Antonius van Harten with the munificent patronage of H.H. Sheik Tahnoon Bin Zayed Al Nahyan.

The material studied was collected directly or using different types of traps (see pp. 14-32 of *Volume 1*) during 2005 and 2007.

This book is similar in all aspects to the previous volumes, respectively published in 2007 and 2009 (see book reviews of *Volumes 1* and *2* in the *ESC Bulletin* 40(2): 76-77 and 41(3): 123-124, respectively). However, in *Volume 3* the printing quality is better, especially for pictures and figures.

Studies on the 52 families by 51 authors from 20 countries are presented in *Volume 3*. The treatment of the families is correct, but it varies considerably because the varied number of species in each one. The families studied are as follows, grouped by order:

Order Araneae - Linyphiidae and Salticidae. Fourteen new species are described; several of them with type specimens also recorded in other countries: Cameroon, Ethiopia, Kenya, Nigeria,

Senegal, Sudan, etc. A new combination is established. The collection of ink figures and photographs is very complete.

Order Orthoptera - Acrididae, Gryllidae, Gryllotalpidae, Pyrgomorphidae, Tetrigidae, Tettigoniidae and Trydactylidae. Photographs of most species and phonograms of several are presented.

Order Hemiptera - Meenoplidae, Kinnaridae, Tropiduchidae. Both chapters (the first devoted to Meenoplidae and Kinnaridae) are well illustrated. Two new species of Kinnaridae are described. A key to families of Auchenorrhyncha from the Arabian Peninsula by M.R. Wilson and J. Turner is presented before the two chapters of those families; the key is useful, very well illustrated, and accompanied by a short diagnosis of each family.

Order Coleoptera - Hydrophilidae, Hysteridae [Part 2, the first one was in *Volume 1*], Hydraenidae, Leioididae, Bostrichidae, Cleridae, Laemophloeidae, Phalaridae, Tenebrionidae [Alleculinae excepted] and Cerambycidae [Part 2, the first one was also published in *Volume 1*]. All chapters present very good photographs and several of them have informative ink figures. As is frequent in taxonomic studies, the authors of the chapters devoted to Hydrophilidae and Hydrénidae use the expression "(s. str.)" placed between the generic and specific names of species instead of writing the name of the subgenus, the nominotypical one, as is correct according to the International Code of Zoological Nomenclature. The genus *Acompsohloeus* Thomas (M.C.) (Col. Laemophloeidae) and 15 species of various families are described including in the type material of some of them specimens of other countries, as Saudi Arabia, Iran and Oman.

Order Neuroptera - Coniopterigidae, with three new species. In this case the photographs are not of the specimens, as is normal, but are scanning electron micrographs of relevant parts of the specimens.

Order Hymenoptera - Stephanidae, Platygastridae [Part 2, the first one was included in *Volume 1*], Leucopsidae, Agaonidae and Pteromalidae, Figitidae, Braconidae [only the genus *Microtypus*], Bethyidae (Parts 1 and 2), Vespidae, Mutillidae [subfamilies Ticoplinae and Dasylabrinae], Sapygidae, Halictidae [Part 2, the first one was published in *Volume 2*]. Most chapters have marvelous illustrations, with color photomicrographs and, in the cases of Platygastridae and Figitidae, electron micrographs. Eighteen new species are described. A special mention is necessary for the chapter on Agaonidae and Pteromalidae by van Noort and Rasplus, because it includes two interesting parts devoted to phylogenetic, biogeographical and bionomics aspects of these peculiar insects that are associated with figs (*Ficus*).

Order Lepidoptera - Nepticulidae, Tischeridae, Stathmopodidae, Coleophoridae, Cosmopterigidae, Choreutidae, and Pyralidae plus Crambidae [Part 2, the first one is in *Volume 1*]. The chapter on Nepticulidae includes color photographs of insects and leaf mines, photomicrographs of genitalia, and molecular analysis. The other chapters include color photographs or drawings of the insects, and photomicrographs or ink drawings of genitalia. Nine new species are established.

Order Diptera - Chironomidae (Tanytarsini excluded), Cecidomyiidae (in part), Rhagionidae, Mydidae, Asteiidae, Canacidae [Part 2, the first one is in *Volume 1*], Drosophilidae and Tachinidae, describing 11 new species. The illustrations are diverse, but in all chapters photographs of complete insects or selected parts are presented, including frequently genitalia and wings. However, in some the genitalia are shown by ink drawings. The quality is in general very good. The chapter on Cecidomyiidae is special, because three unidentified species of *Actilasioptera* living on grey mangrove (*Avicennia marina*) are presented; they may be new species, but they are not described in expectation of collecting more specimens.

Juan M. Nieto Nafría
Departamento de Biodiversidad y Gestión Ambiental
Universidad de León, 24071 Leon (Spain)



Gary Cuming

Frederick Gordon Cuming (1922 – 2010)

Fred Cuming died early on 20 June 2010, at the age of 87, in the Colchester Regional Hospital in Truro, Nova Scotia. Fred was born in Fredericton, where he received a BSc (probably pre-med) from the University of New Brunswick. Fred had lost an eye and gave up thoughts of medicine to accept employment with the Forest Biology Division of Canada Agriculture (now a component of the Canadian Forestry Service).

When I moved to Fredericton in 1957, Fred was head of the sub-laboratory in Debert, which oversaw the Forest Insect Survey in Nova Scotia and provided laboratory space for people conducting forest insect and disease research in that province, notably Douglas G. Embree whose work on the winter moth (*Operophtera brumata*) is well known nationwide and beyond. Fred was instrumental, along with Lloyd Hawbolt, Nova Scotia Lands and Forests, and Ken Greenidge, a tree pathologist with CFS, in establishing advisory committees on Dutch elm disease control – that

disease being vectored by bark beetles – in most of the towns and cities of the Province. Fred, too, worked on the winter moth and, with his thesis “Some aspects of the biology of the winter moth, *Operophtera brumata* (L.) in Nova Scotia (Lepidoptera: Geometridae)”, earned an MSc from Dalhousie University.

With the closing of the Debert sub-laboratory in 1973, Fred was moved to Fredericton where he left entomology to become the Information Officer. In Nova Scotia Fred had shown he was particularly good at communication and coordination among diverse jurisdictions for insect and disease survey and control.

Fred was a Royal Canadian Navy veteran of World War II, and a long time member of the Royal Canadian Legion.

Fred had many outside interests but above all, it seems, in music. He was Director of the [Saint John] River Valley Barbershop Chorus and, after retiring to Nova Scotia, the Truro Barber Shop Chorus.

Fred was predeceased by his wife Barbara, the day before, in the same hospital, only minutes before he himself died. They are survived by three sons, Gary, Mark, and John.

Doug Eidt (Keswick Ridge), with help from Doug Embree

J.C. Maurice L'Arrivée passed away on 18 September 2009, aged 86 years, in Lethbridge, Alberta. He was born on 18 June 1923 in St. Boniface, Manitoba, to E. Bernier L'Arrivée and Elodie Guilbert, the first of their 10 children.

Maurice received his early education in St. Boniface. He served 4 ½ years in the Royal Canadian Air Force and, after World War II, he attended the University of Manitoba where he received BSA and MSc degrees in Agriculture, specializing in Horticulture and Entomology. He then transferred to the Iowa State College in Ames, Iowa, where he obtained his PhD degree in Apiculture with a thesis dealing with the survival of honey bee larvae in colonies infected with *Bacillus larvae*. In 1956 he began work as a research scientist at the Agriculture Canada Research Station in Brandon, where he continued his work on the diseases of honey bees, especially nosema. With the consolidation of all federal government apicultural research, in 1965 he was transferred to the Central Experimental Farm in Ottawa. Here, in collaboration with T.A. Gochnauer, he briefly returned to research on *B. larvae* infection of honey bees before moving to the Editorial Unit, Information Division of Agriculture Canada as a publication writer. Within 2 years, he was made Head of the Unit, in charge of both English and French publications, supervising 28 staff. Finally, in 1985 he moved to the Research Station in Lethbridge, to be its Information Officer until he retired in 1987. Maurice was an active member of the community, serving as a lay minister, a member of the Knights of Columbus, and a member of the Royal Canadian Legion. He is survived by his wife of 59 years, Catherine, their six children and grandchildren.



Catherine L'Arrivée

**J.C. Maurice L'Arrivée
(1923 – 2009)**

Cedric Gillott (Saskatoon), based on information provided by Mrs Catherine L'Arrivée.



Bob Lalonde

A couple of andrenid bees.



Catherine Khan

Mushtaq Ahmed Khan
(1919-2010)

Mushtaq Ahmed Khan passed away on 11 October 2010 at the age of 91 years. Mushtaq was born in Najibabad, India. He attended Bengal Veterinary College in Calcutta, where he graduated with his degree in veterinary science (GVSc) in 1938. After serving briefly with the Indian Army Veterinary Corps as a veterinarian, he joined the Imperial Veterinary Research Institute in 1939 as a research assistant and worked at the laboratory at Mukteswar-Kumaon. In late 1939 he transferred to the laboratory at Isatnagar. From 1947 to 1949, he studied at Michigan State University obtaining a MSc in entomology. Following his studies in the United States, he returned to Pakistan and worked in research and extension with the Pakistan Ministry of Agriculture in Karachi.

Mushtaq's first wife passed away in 1952. In 1954 he and his four children emigrated to Canada, where he then spent a year working as a research assistant with Dr A.A. Kingscote at the Ontario Veterinary College on factors involved in attraction of mosquitoes to animals. In 1955 he joined the nematology section in the Entomology Division, Agriculture Canada, to work with Dr A.D. Baker. In 1957 he was appointed to the Agriculture Canada, Veterinary-Medical Entomology Unit at the Lethbridge Research Station to work in veterinary toxicology. Mushtaq studied the effects of organophosphorus pesticides on reproduction of animals at the Royal Veterinary College in England from 1965 to 1967 and received a PhD from the University of London in 1972.

Mushtaq's work at the Lethbridge Research Centre advanced the development and application of chemical pesticides for control of livestock pests in Canada. He promoted work in that field through the Study Institute on Toxicity of Pesticides on Livestock, sponsored by the North Atlantic Treaty Organization and organized by the Lethbridge Research Centre in 1970. His research and promotion of organized area control of cattle grubs was a major contribution to the improved effectiveness of treatments with systemic pesticides. It led to the present organization of warble free programs in Alberta.

Mushtaq met Catherine in Guelph and they married in 1955. They had four children. After his retirement in 1984, Mushtaq and Catherine moved to Qualicum Beach, British Columbia. Mushtaq was an avid community member as evidenced by his membership in Rotary International, Independent Order of Oddfellows Lethbridge Lodge, and the Islamic Centre of Nanaimo, British Columbia. Mushtaq was an active member of the Canadian Veterinary Association and the Entomological Society of Alberta.

Joe Shemanchuk (Lethbridge)

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 R. West, *ex officio*, Portugal Cove
 P. Mason, *ex officio*, Ottawa

Science Policy and Education / Politique scientifique et éducation

R. De Clerck-Floate, Chair, Lethbridge
 W. Riel, ESBC, Victoria
 L. Dosdall, ESA, Edmonton
 M. Erlandson, ESS, Saskatoon
 T. Galloway, ESM, Winnipeg
 H. Douglas, ESO, Ottawa
 G. Labrie, SEQ, St-Mathieu-de-Beloeil
 C. Parsons, AES, St. John's
 G. Zilahi-Balogh, Kelowna
 D. Huber, Prince George
 A. Bennett, Ottawa
 P. Mason, *ex officio*, Ottawa

Student Affairs / Affaires étudiantes

C. Moffat, Chair, Kelowna
 J. Mlynarek, Ottawa
 L. Pinault, St. Catharines
 L. Durocher-Granger, St-Jean-sur-Richelieu
 A. Leroux, Winnipeg
 K. Reeh, Truro
 P. Abram, Ottawa
 J. Myers, *ex officio*, Vancouver
 P. Mason, *ex officio*, Ottawa

Student Awards / Prix aux étudiants

J. Myers, Chair, Vancouver
 H. Proctor, Edmonton
 F. Hunter, St. Catharines
 N. Holliday, Winnipeg
 T. Wheeler, Ste-Anne-de-Bellevue
 D. Currie, Toronto
 C. Cloutier, Laval
 P. Mason, *ex officio*, Ottawa

Ad hoc Business Plan / Plan d'affaires ad hoc

M. Cusson, Chair, Québec
 G. Ball, Edmonton
 C. Buddle, Montreal
 R. Lamb, Winnipeg
 C. Borkent, Ste-Anne-de-Bellevue
 G. Moreau, Moncton
 D. Shorthouse, Wood's Hole

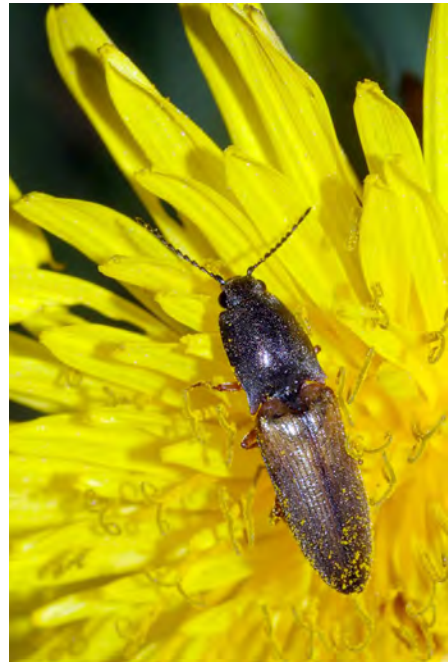
Web Content / Contenu Web

M. Cusson, Chair, Québec
 R. West, Portugal Cove
 K. Rondeau, Lethbridge
 P. Fields, Winnipeg
 P. Mason, *ex officio*, Ottawa

Representatives / Représentants

ESC representative to Biological Sur- vey of Canada / Représentant de la Commission biologique du Canada

F. Sperling, Edmonton



The click beetle *Corymbitodes tarsalis*.

Max Larrivée

Actions items from the Governing Board Meetings in Vancouver, British Columbia

Annabelle Firlej, Secretary

Governing Board Meeting on 30 October 2010

Treasurer

S. Brooks will replace P. Bouchard after AGM 2010. M. Evenden thanked P. Bouchard on behalf of the Board for his considerable service to the Society.

Report from the Office Manager

The Society should find a replacement for D. Buchanan who has been employed by ESC to help the Office Manager for the last 10 years.

ESC Headquarters Committee

The highest priority for property repairs is the back porch, which has a leaking roof. Metal plates were temporarily fixed above the roof to avoid further damage. The Board recommended that the Committee choose a contractor and plan repairs for spring 2011.

Finance Committee

The current Treasurer P. Bouchard will replace the Chair S. Brooks. The President M. Evenden thanked S. Brooks on behalf of the Board for his service to the Society.

Scientific Editor

TCE festschrift issues are in preparation on the initiative of Brad Sinclair who requested the agreement of the Board to give free printed copies to acknowledge authors who contributed to festschrifts. S. Brooks will evaluate the cost of the supplementary printed copies and the Board should approve his recommendation.

Ad Hoc Committee for *TCE* publisher

This Committee received and evaluated proposals from three publishers for publishing *TCE* (Taylor & Francis, NRC Research Press, and Cambridge University Press). Following an exhaustive round-table discussion comparing proposals by each publisher, the Board decided unanimously that Cambridge University Press offered the best option for publishing *TCE*. A contract of 1 year with NRC Research Press should be signed because the switch to Cambridge University Press is expected to start January 2012. S. Brooks and K. Floate will head negotiations with the new publisher.

R. Bennett will resign in September 2011 and recommended a minimal overlap of 3 months with the new Editor. M. Evenden approached 12 individuals to replace the existing Editor-in-Chief but no one accepted. P. Mason will investigate ways to have an Editor-in-Chief for 2 years with financial support for editorial activities to smooth the transition between NRC Research Press and Cambridge University Press. This position should be announced at the AGM and in the December *Bulletin*.

Editor - *Bulletin*

Assistant Editor Fred Beaulieu will step down after the December 2010 issue and the *Bulletin* Editor is searching for a replacement.

Publications Committee

K. Floate will be appointed as Chair of the Publications Committee to replace the recently

deceased Peter de Groot. The change to Publications Committee Guidelines, the development of conditions of use for material downloaded from the website and the addition of the Photo Contest to the Publications Committee Guidelines are outstanding action items to be addressed by the Committee. To facilitate the procedure of photo selection for the contest, the Board recommended the creation of a subcommittee consisting of three judges for selecting pictures. One of them should be appointed to serve on the Web Content Committee. R. Bennett also suggested that the Publications Committee be in charge of transferring pictures to the contractor for the *TCE* cover and dealing with it for delivering the cover in January.

Elections Committee

Upon a request from the Webmaster, the Elections Committee Guidelines should be changed to ensure that the Chair should send the results of elections to the Secretary for posting on the website.

Achievement Awards Committee

The inaugural Bert and John Carr Award will be presented at the 2011 Acadian Entomological Society and the Entomological Society of Canada Joint Annual Meeting in Halifax. The description of this new award should be posted on the website.

Insect Common Names Committee

The Chair M. Roy will step down after AGM 2010. M. Evenden thanked M. Roy on behalf of the Board for her service to the Society.

Membership Committee

The ESC 2010 Membership Application Form was revamped to reflect HST tax changes in several provinces and the new form was posted on the ESC website. Upon a suggestion by M. Erlandson, the Board recommended that Regional Directors solicit members from regional societies to become members of the ESC.

Student Awards Committee

A Canadian student pursuing a graduate degree program at an American university has asked the Chair if he could be eligible for the ESC student awards. The Board recommended that only students following graduate degree programs at a Canadian university be eligible for student awards as currently specified in the rules of awards.

Student Affairs Committee

A. Thielman is working with the chair of the Annual Meeting Committee to develop guidelines for running future Graduate Student Symposiums. The Board recommended that presenting \$100 to each graduate student speaking in the symposium become the responsibility of the Society rather than a responsibility of the Annual Meeting Organising Committee. The Board asked the Treasurer to increase the President's discretionary fund to cover this expense. M. Evenden thanked A. Thielman on behalf of the Board for her services to the Society.

Annual Meeting Committee

The ESC accepted the ESO proposal to host the 2013 JAM in Guelph, Ontario, to celebrate the 150th anniversary of the ESC/ESO. To restore the east-west tradition for holding meetings, the ESC should ask to again defer the JAM meeting with SEQ to 2015 and ask the ESS to move to 2014. G. Umphrey has asked Canada Post to issue commemorative stamps for the 150th anniversary of the ESC/ESO.

The Chair B. Elliott proposed changes to the organizational structure of joint annual meetings. Three points were proposed:

1) The creation of a centralized registration system for the annual meeting

The Board approved and charged the incoming Treasurer S. Brooks to evaluate the possibility to have a bank account for the annual meeting.

2) The utilization of an ESC selected Scientific Program Chair

The Board did not approve this but recommended rather that a message be sent to each organizing committee to offer help for the scientific program from the Governing Board when needed and this request should pass through their regional directors. To facilitate the work of the Scientific Committee and reduce their work, the Board suggested passing over files regarding the JAM program to the next organizing committee.

3) The creation of a centralized Fund-Raising Committee for the annual meeting

The Board approved this recommendation and suggested that the Fund-Raising Committee be reactivated.

Proposal to affiliate the Canadian Journal of Arthropod Identification with ESC

S. Marshall asked the Board to consider whether the Canadian Journal of Arthropod Identification, the Biological Survey of Canada's digital biodiversity journal, could become a core journal of the ESC. The President recommended that a decision on this issue be taken after choosing the new *TCE* publisher; however, the Board confirmed that the Society will support the BSC in the publication of this Journal. S. Marshall should be approached to serve as a Publications Committee member.

Affiliated Entomological Societies

There were no requests for action by the Board from affiliated societies.

Governing Board Meeting on 2 November 2010

Committee appointments

The list of Committees and Representatives for 2010-2011 as prepared by the President, and the President's appointees to remaining positions to be filled, were approved by the Board.

2010 Budget

The 2010 budget, once finalized, will be sent to the Board for approval by e-mail ballot.

Minutes of the 60th Annual General Meeting

Coast Plaza Hotel, Vancouver, British Columbia

2 November 2010

President M. Evenden called the meeting to order at 17:00. Forty-seven members were present.

1. Notice of Meeting. Notices of the meeting were published in the March and June 2010 issues of the *Bulletin* (Vol. 42) and on the ESC website.

2. Proxies. R. West for C. Parsons (AES).

3. Additions to the Agenda and Approval of the Agenda. C. Vincent moved and K. MacKenzie seconded that the agenda be accepted. **Carried.**

4. Deceased Members of the Entomological Community. A minute of silence was observed in memory of the following members of the entomological community who passed away during the past year: Rob Roughley, Harold Westdal, Rex Kenner, Terry Shore, Maurice L'Arrivée,

Frank Webb, Fred Cuming, Phil Barker and P. de Groot.

5. Minutes of the 59th Annual General Meeting. Minutes of the 59th Annual General Meeting were posted on the web site and published in the December 2009 issue of the *Bulletin* (Vol. 41). S. Rochefort moved and K. Floate seconded that the minutes be accepted. **Carried.**

6. Business Arising from the Minutes. There was no business arising from the minutes.

7. Report from the Governing Board. President M. Evenden presented a report on behalf of the Governing Board and gave an update on progress during the past year and plans for the coming year. The report from the Governing Board and regular updates are published in the *Bulletin*. This current report will be published in the December 2010 *Bulletin* (Vol. 42).

7.1. Proposal to publish *The Canadian Entomologist*. Initiated in response to a proposal received from Taylor & Francis to publish *The Canadian Entomologist*, an *Ad Hoc* Committee was formed in June 2010 to identify potential new publishers for the *TCE*. The Chair, K. Floate, presented a summary of the proposals made by various publishers and explained the reasons why the Governing Board recommended the choice of Cambridge University Press as the new publisher of *TCE*. Some members asked for details and the assembly welcomed this change.

7.2. *TCE* Editor-in-Chief position for two years. Because R. Bennett, current *TCE* Editor-in-Chief, will step down as EiC in October 2011, and to ensure smooth operation during the transition to the new *TCE* publisher, the Society needs to define the role of *TCE* editor and find somebody to make the transition between the two publishers. The President, P. Mason announced the opening of a position for *TCE*-Editor-in-Chief for two years. Ideally, the candidate should fill the position in October 2011; he/she will receive financial support for editorial duties.

7.3. New Bert & John Carr Award – change to Standing Rules

W. Riel moved and G. Anderson seconded that Standing Rule VIII be changed:

Insertion of the following paragraph after the second paragraph:

VIII 4- (a) *The Committee shall invite applications from individuals for the Bert and John Carr Award in support of research activities on the faunistics, natural history or taxonomy of Canada's insect fauna.*

Carried. Action: W. Riel

W. Riel moved and R. Bennett seconded that Standing Rule VIII be changed:

From:

4- (a) The Committee shall select worthy recipients for these Awards from among the nominees, but may not itself make nominations. The person chosen to receive each Award shall require the endorsement of the Governing Board. If a suitable recipient is not found, an award will not be made.

To:

4- (a) The Committee shall select worthy recipients for these Awards from among the nominees/*applicants*, but may not itself make nominations/*applications*. The person chosen to receive each award shall require the endorsement of the Governing Board. If a suitable recipient is not found, an award will not be made.

Carried. Action : W. Riel

7.4. New *TCE* Division Editor – change in Standing Rules

W. Riel moved and K. MacKenzie seconded that Standing Rule VI be changed

From:

5- (c) The Scientific Editor shall have a maximum of 4 Division Editors and at least 4 Associate Editors.

To:

5- (c) The Scientific Editor shall have a maximum of 5 Division Editors and at least 4 Associate Editors.

Carried. Action: W. Riel

8. Auditor's Report. S. Brooks presented the Auditor's Report for 2010. The report was posted on the web site and summarized in the June 2010 issue of the *Bulletin*. P. Bouchard moved and P. Mason seconded that the Auditor's Report be accepted. **Carried. No action required.**

9. Elections Committee Report. A. Firlej read the Elections Committee Report. Those elected were: R. De Clerck-Floate, Second Vice-President; and Brent Elliott, Director at Large.

10. Installation of Officers. R. De Clerck-Floate, Second Vice-President, was escorted to the table by P. Fields. M. Evenden (outgoing President) then congratulated P. Mason as incoming President of the Entomological Society of Canada. The new President assumed office and thanked the members for the honour of being elected President.

11. Presentation of Service Awards. President P. Mason thanked M. Evenden for her service to the Society and presented her with a Service Award. A Service Award was presented to Patrice Bouchard in recognition of his excellent work as Treasurer. S. Brooks was welcomed as the incoming Treasurer.

12. Appointment of Auditor. S. Brooks moved and N. Holliday seconded that Bouris, Wilson LLP be appointed as Auditor for 2010. **Carried. Action: S. Brooks.**

13. Resolutions on behalf of the Entomological Society of Canada

13.1. Thanks to the Organizing Committee

The following resolution was read by R. Bennett and accepted with a round of applause:

Whereas the Entomological Society of Canada has met jointly with the Entomological Society of British Columbia at the Coast Plaza Hotel, Vancouver, British Columbia; and

Whereas there has been a full and interesting meeting of lectures, symposia, and papers; and

Whereas the meeting has been planned with care and concern for those attending; and

Whereas there has been ample opportunity for social interaction and visits to Vancouver and surrounding areas;

Be it resolved that the Entomological Society of Canada express its sincere thanks to the Organizing Committee for their hard work and skill in arranging a worthwhile and entertaining program; and

Be it further resolved that the Society thank the Organizing Committee and meeting contributors for their generous assistance; and

Be it further resolved that the Society express its thanks to the Management and Staff of the Coast Plaza Hotel for their courteous assistance during the Meeting.

Action: A. Firlej

14. New Business

14.1 Student President's prize

D. Quiring outlined that many undergraduate students presenting a talk or a poster to the ESC JAM meeting are not eligible for the President's Prizes. The President P. Mason indicated that the Board has taken an action on this issue during the outgoing Governing Board meeting and that undergraduate students will be eligible for President's Prizes starting at the next JAM.

K. Mackenzie underlined also dysfunction in the process of poster judging because judges had to evaluate more than 30 posters in a very short period of time. W. Strong also indicated that the 2010 Organizing Committee highlighted some things to be changed in the Annual Meeting procedure. M. Evenden, Past-President, suggested that concerned members should contact B. Elliott, new Chair of the Annual Meeting Committee.

15. Notice of 61st Annual General Meeting. The 61st Annual General Meeting will be held 8 November 2011 with the Acadian Entomological Society at the Westin Nova Scotian Hotel in Halifax, Nova Scotia. Further notices for the meeting will be published in the March and June 2011 issues of the *Bulletin* (Vol. 43) and on the ESC website.

16. Adjournment. President P. Mason adjourned the 60th Annual General Meeting at 17:49 following a motion by P. Fields seconded by W. Strong.

Nominees sought for the Gold Medal and the C. Gordon Hewitt Award

Members of the Society are invited to nominate individuals whom they regard as eligible for these awards. Nominations shall be made only by members of the Society; they shall be signed by the nominator and by at least one seconder who shall also be a member of the Society.

Nominators should include: (1) the name and address of the nominee(s); (2) a statement of relevant achievements (3-5 pages) which may include, but is not limited to, the following: outline of research areas, particularly major contributions; numbers of articles in refereed journals, books, book chapters, patents; editorial activities; teaching history, numbers of graduate students, teaching awards; value of grants; involvement in ESC; active involvement and/or memberships in other societies; entomological extension/community involvement; organizing of symposia, meetings; (3) a current curriculum vitae; and (4) the name of the nominator and at least one seconder. Such documentation should stress the particular achievement(s) to be considered and not merely the general competences of the nominee. Other seconders may merely state their support, without documentation in a letter of endorsement of the nomination. The Committee shall neither prepare the documentation nor conduct research connected with it. **Nominees for the C. Gordon Hewitt Award must be less than 40 years of age throughout the calendar year** in which the award is both announced and awarded.

Nominations should be sent to the ESC office in an envelope marked "Confidential", postmarked no later than **28 February 2011** or e-mailed to the Chair of the Achievement Awards Committee (michel.cusson@nrcan.gc.ca).

Nominations pour la Médaille d'or et le Prix C. Gordon Hewitt

La Société invite les membres à lui faire parvenir les noms des personnes qu'ils considèrent éligibles à ces deux prix. Seuls les membres de la Société peuvent présenter des candidatures. Chaque mise en candidature doit porter la signature du présentateur et d'au moins une autre personne appuyant la proposition.

Les mises en candidatures doivent inclure: (1) le nom et l'adresse du (des) candidat(s); (2) les réalisations pertinentes (3-5 pages), lesquelles peuvent inclure, mais ne se limitent pas à: un résumé des sujets de recherche, en particulier les contributions majeures du candidat; les nombres d'articles dans des revues avec réviseurs, de livres, de chapitres de livres, de brevets; les activités éditoriales; l'historique en enseignement, le nombre d'étudiants gradués, les prix d'enseignement; la valeur des subventions; l'implication dans la SEC; l'implication active et/ou l'adhésion à d'autres sociétés; la vulgarisation et l'implication dans la communauté; l'organisation de symposia et réunions; (3) un curriculum vitae à jour; et (4) le nom du présentateur et d'au moins une personne appuyant la proposition. Une attention particulière doit être accordée aux réalisations pertinentes et non seulement aux compétences générales du candidat. D'autres personnes appuyant la candidature peuvent simplement énoncer leur appui dans une lettre, sans documentation autre. Le comité de sélection ne doit pas avoir à préparer la documentation ou effectuer une recherche sur le candidat. **Le candidat désigné pour le prix C. Gordon Hewitt doit être âgé de moins de 40 ans pour toute la durée de l'année** au cours de laquelle le prix est annoncé et décerné.

Les candidatures doivent être envoyées au bureau de la SEC dans une enveloppe cachetée identifiée "Confidentiel" au plus tard le **28 février 2011**, le cachet de la poste faisant foi, ou envoyées électroniquement au président du Comité des prix d'excellence (michel.cusson@nrcan.gc.ca).

Nominees sought for Honorary Members of the Entomological Society of Canada

Members of the Society are invited to nominate individuals whom they regard as eligible for this award. Honorary Members are deemed to have made an outstanding contribution to entomology and may not comprise more than 10 members or 1% of Active Membership of the Society. Nominations for Honorary Membership should be supported by at least five Active or Special Members of the Society. Nominations should be sent to the ESC office in an envelope marked “Confidential” postmarked no later than **28 February 2011** or e-mailed to the Chair of the Achievement Awards Committee (michel.cusson@nrca.gc.ca). The Society currently has eight Honorary Members.

Nominees sought for Fellows of the Entomological Society of Canada

Members of the Society are invited to nominate individuals whom they regard as eligible for this award. Fellows are deemed to have made a major contribution to entomology, and may not comprise more than 10% of the Active Membership of the Society. Nominations for fellows should be supported by at least four Active or Special Members of the Society, and should be sent to the ESC office in an envelope marked “Confidential” postmarked no later than **28 February 2011** or e-mailed to the Chair of the Achievement Awards Committee (michel.cusson@nrca.gc.ca).

Nominations pour Membres honoraires de la Société d'entomologie du Canada

La Société invite les membres à lui faire parvenir les noms des personnes qu'ils considèrent éligibles à ce prix. Les Membres honoraires auront contribué de façon exceptionnelle à l'entomologie, et leur nombre ne doit pas dépasser 10, ou 1% des membres actifs de la Société. Les candidatures doivent être appuyées par au moins quatre membres actifs ou spéciaux de la Société. Les candidatures doivent être envoyées au bureau de la SEC dans une enveloppe cachetée identifiée “Confidentiel” au plus tard le **28 février 2011**, le cachet de la poste faisant foi, ou envoyées électroniquement au président du Comité des prix d'excellence (michel.cusson@nrca.gc.ca). La Société compte en ce moment huit Membres honoraires.

Nominations pour Membres associés de la Société d'entomologie du Canada

La Société invite les membres à lui faire parvenir les noms des personnes qu'ils considèrent éligibles à ce prix. Les Membres associés auront contribué de façon exceptionnelle à l'entomologie, et leur nombre ne doit pas dépasser 10% des membres actifs de la Société. Les candidatures doivent être appuyées par au moins quatre membres actifs ou spéciaux de la Société. Les candidatures doivent être envoyées au bureau de la SEC dans une enveloppe cachetée identifiée “Confidentiel” au plus tard le **28 février 2011**, le cachet de la poste faisant foi, ou envoyées électroniquement au président du Comité des prix d'excellence (michel.cusson@nrca.gc.ca).

Seeking Secretary

The Entomological Society of Canada is looking to fill the position of Secretary, beginning in October 2011. Please note that the Secretary is considered a Trustee of the Society and is expected to attend meetings of the Governing Board and the Executive Council. The Secretary prepares meeting agendas; records the minutes for, and identifies action items arising from, all meetings of the Board and of the Society; prepares all ballots; notifies Board Members and Members of the Society of forthcoming meetings; distributes reports and other material as required, using the *Bulletin* and Website when appropriate; and assists the President by helping to prepare committee lists, communicating concerns from members of the Board, Committee Chairs and the Society, and providing information on past activities of the Society from electronic and archived files. The ability to work in both French and English, experience as a past board member, and a general knowledge of the bylaws, standing rules and committee guidelines of the society would be an asset. Please express your interest in the position to the President, Peter Mason, by **31 January 2011** (peter.mason@agr.gc.ca). The final selection will be made by an ad hoc committee convened by the President.

Secrétaire recherché

La Société d'entomologie du Canada cherche à combler le poste de secrétaire, dès octobre 2011. Veuillez noter que le secrétaire est considéré comme un fiduciaire de la Société et doit assister aux réunions du conseil d'administration et du conseil exécutif. Le secrétaire prépare l'ordre du jour des réunions ; prépare le compte-rendu et identifie les actions à prendre suite à toutes les réunions du conseil d'administration et de la Société ; prépare les bulletin de vote; notifie les membres du conseil d'administration et les membres de la Société des réunions à venir ; distribue les rapports et autres items requis, utilise le *Bulletin* et le site Internet lorsqu'approprié ; et assiste le président en aidant à la préparation des listes de comités, en communiquant les questions aux membres du conseil d'administration, aux présidents des comités et à la Société, et en fournissant les informations sur les activités antérieures de la Société à partir des archives papier et électroniques. La capacité à travailler en français et en anglais, l'expérience en tant que membre du conseil d'administration, et une connaissance générale du règlement intérieur, des règles permanentes et des lignes directrices des comités de la Société sont un atout. Merci de communiquer votre intérêt dans ce poste au président, Peter Mason, au plus tard le **31 janvier 2011** (peter.mason@agr.gc.ca). La sélection finale sera effectuée par un comité ad hoc convié par le président.

Applicants sought for the Bert and John Carr Award

Following the creation of the Bert and John Carr Award in 2010 (see *ESC Bulletin*, [June 2010](#) [p. 102] or [September 2010](#) [p. 170], for details), the Society seeks *applicants* for this cash award, which is in support of research activities by individuals who study **insect faunistics, or the natural history and taxonomy of Canada's insect fauna**. Preference will be given to applications by amateurs, but applications by students and others will be considered. Applications should consist of: (1) the name and address of the applicant; (2) a statement of the research activity to be undertaken, including a cost estimate of up to \$500; and (3) a current curriculum vitae. Applications should be sent to the ESC office in an envelope marked "Confidential" postmarked no later than **28 February 2011** or e-mailed to the Chair of the Achievement Awards Committee (michel.cusson@nrca.gc.ca).



John and Bert Carr

<http://www.entsocberta.ca/carrmem.htm>

Applications pour le Prix Bert & John Carr

Suite à la création du Prix Bert & John Carr en 2010 (pour plus de détails, voir le *Bulletin de la SEC*, [juin 2010](#) [p. 102] ou [septembre 2010](#) [p. 170]), la Société invite des candidats à appliquer pour ce prix en espèce, lequel est en appui à des activités de recherche par des individus qui étudient **la faunistique des insectes, ou l'histoire naturelle et la taxonomie de la faune entomologique du Canada**. Une préférence sera donnée aux applications provenant d'amateurs, mais des applications présentées par des étudiants ou d'autres individus seront aussi prises en considération. Les applications devront inclure: (1) le nom et l'adresse du candidat; (2) un énoncé sur les activités de recherche devant être entreprises par le candidat, dont une estimation des coûts jusqu'à concurrence de 500\$; et (3) un curriculum vitae. Les applications doivent être envoyées au plus tard le **28 février 2011**, le cachet de la poste faisant foi, ou envoyées électroniquement au président du Comité des prix d'excellence (michel.cusson@nrca.gc.ca).

On wisdom and science

- *The wise person questions himself, the fool others.* – Henri Arnold
- *In research, always question others, even the experts.* – Assistant Editor
- *Stop speculating and stick to your data, they should speak for themselves.* – Dave Walter

Honours and Awards at JAM 2010



Charles Vincent receiving the Gold Medal from Peter Mason



Peter Mason presents Dezene Huber with the C. Gordon Hewitt Award



Past President Maya Evenden receiving a Service Award from Peter Mason



Peter Mason presents outgoing Treasurer Patrice Bouchard with a Service Award

Rick West

Aware of a new invasive alien plant pest species in the country? Please notify the CFIA Plant Health Surveillance Unit at surveillance@inspection.gc.ca.



Canadian Food Inspection Agency / Agence canadienne d'inspection des aliments

We need your help!

The CFIA is always interested in hearing about new reports of invasive alien plant pests either in Canada or in other countries.

If you know of a invasive alien plant pest that could be a problem to Canadian agriculture, forestry or the environment, please let us know by filling in the reverse of this postcard.

Thank you!
CFIA Plant Health Surveillance Unit

Canada

The Asian Long-horn Beetle, *Anoplophora glabripennis*, was introduced in Canada in the Toronto area most likely via wood packaging material from China. It kills maples and a variety of other native hardwood trees. CFIA is trying to prevent the spread of this exotic pest in the country.



Bruce Gill

Arthropods of Canadian Grasslands (Volume 1): Ecology and Interactions in Grassland Habitats. Shorthouse, J.D., and Floate, K.D. (eds.). 2010. Biological Survey of Canada. 358 pp. Can\$45.95. Available for hardcopy purchase at: <http://www.volumes-direct.com/detail.aspx?ID=4598>. Also freely available online as downloadable PDF files at: <http://www.biology.ualberta.ca/bsc/english/grasslandsbook.htm>.

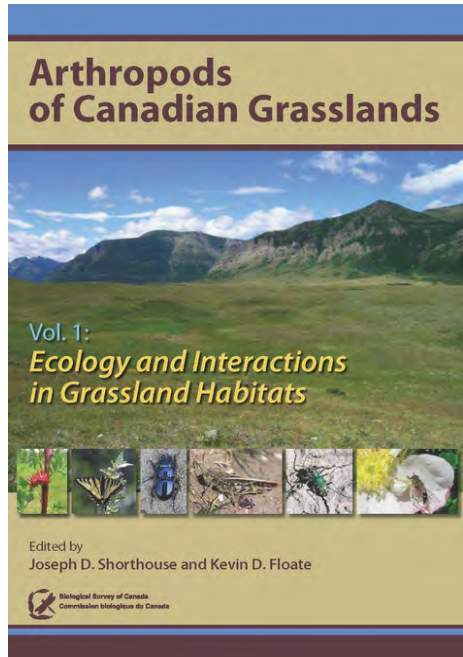
This is the first of a planned three-volume series that will provide an overview of Canada's grasslands and their associated insects, mites, and closely related arthropods.

Grasslands were once a dominant feature of Canada's landscape, extending across most of southern Alberta, Saskatchewan and Manitoba, with smaller expanses in the Yukon, the interior of British Columbia, and in eastern Ontario. Now, virtually all of these grasslands have been extensively modified for agricultural production with only scattered patches left undisturbed.

Our current knowledge of grassland arthropods is largely limited to species of economic importance, usually exotic species or native species that have become agricultural pests.

There exists relatively little information on the arthropods of native grasslands, such that we know little about their biodiversity, their role in ecosystems, and their ability to respond to habitat change.

With the publication of *Arthropods of Canadian Grasslands*, the Biological Survey of Canada hopes to increase awareness of the plight of Canada's grasslands, to draw attention to their associated arthropods, and to provide a baseline reference to support future studies of arthropods in these environments.



Marie-Pierre Mignault

This beetle was recently seen in the Ottawa region. Is it the Asian long-horn beetle that spread north? No, this is the Whitespotted sawyer beetle, *Monochamus scutellatus*, which is native to North America. It can be differentiated from the Asian pest by its white scutellum.

Assistant Professor in Insect Systematics and Biodiversity

The Department of Biological Sciences, Université de Montréal, invites applications for a full-time tenure-track position as Assistant Professor in Insect Systematics and Biodiversity.

Responsibilities

Successful candidates will be expected to teach at all three levels of the curriculum, supervise graduate students, engage in ongoing research and publication, and contribute to the academic life and reputation of the institution. The hired candidate will also act as curator of the Ouellet-Robert Entomological Collection and contribute to the development of the Montréal Biodiversity Centre.

Requirements

- PhD in Biology with a specialization in Insect Systematics and Biodiversity.
- Postdoctoral research experience is an asset.
- Excellent teaching ability for higher education and ability to use new technology in teaching.
- Excellent publication record in international scientific journals.
- Able to develop an innovative, competitive world-class research program in Insect Systematics and Biodiversity.
- Insect collection management experience desirable and ability to integrate molecular or informatics approaches.
- Open to interdisciplinarity and collaboration with department members
- Upon arrival, priority to develop an undergraduate course in entomology.
- Proficiency in the French language. The Université de Montréal is a Québec university with an international reputation. French is the language of instruction. To revitalize its teaching faculty, the University is intensively recruiting the world's best specialists. In accordance with the institution's language policy [http://www.direction.umontreal.ca/secgen/recueil/politique_linguistique.html], the Université de Montréal provides support for newly-recruited faculty to attain proficiency in French.

Salary

The Université de Montréal offers a competitive salary and a complete range of employee benefits.

Starting date

1 June 2011

Deadline

The complete application, including a cover letter, curriculum vitae, copies of three recent publications, a research proposal, and a statement of teaching philosophy and insect collection management, must be received at the address below **by 15 January 2011**.

Three letters of recommendation are to be sent directly to: **Bernadette Pinel-Alloul, Director, Department of Biological Sciences, Université de Montréal, P. O. Box 6128, Station Centre-Ville, Montréal, Quebec, H3C 3J7, Canada**

For more information about the Department of Biological Sciences and the Montréal Biodiversity Centre, please consult the Web sites at: www.bio.umontreal.ca and http://www.biodiversite.umontreal.ca/index_en.htm.

Confidentiality

The Université de Montréal application process allows all regular professors in the Department to have access to all documents unless the applicant explicitly states in her or his cover letter that access to the application should be limited to the selection committee. This restriction on accessibility will be lifted if the applicant is invited for an interview.

Employment Equity Program

The Université de Montréal upholds the principles of employment equity and welcomes applications from women, ethnic and visible minorities, aboriginals and people with disabilities. Applicants who belong to one of these groups are asked to complete the employment equity identification questionnaire posted www.fas.umontreal.ca/affaires-professorales/documents/quest-acces-emploi-EN.pdf and attach it to their application.

Immigration Requirements

In compliance with Canadian immigration requirements, priority shall be given to Canadian citizens and permanent residents.

Professeure ou professeur de systématique et biodiversité des insectes

Le Département de sciences biologiques, Université de Montréal, sollicite des candidatures pour un poste à temps plein de professeure ou professeur de systématique et biodiversité des insectes au rang d'adjoint.

Fonctions

Les candidats seront appelés à enseigner aux trois cycles, à encadrer des étudiants aux études supérieures, à poursuivre des activités de recherche, de publication et de rayonnement ainsi qu'à contribuer aux activités de l'institution. Le candidat retenu devra en outre assurer les fonctions de conservateur de la collection entomologique Ouellet-Robert et contribuer au développement du Centre sur la biodiversité.

Exigences

- Doctorat en biologie avec une spécialisation en systématique et biodiversité des insectes.
- Stage postdoctoral constitue un atout important.
- Excellentes aptitudes en enseignement supérieur et capacité d'intégrer de nouvelles technologies pédagogiques.
- Excellent dossier de publications dans des revues internationales.
- Capacité de développer un programme de recherche original et compétitif de calibre international en systématique et biodiversité des insectes.
- Expérience de gestion d'une collection d'insectes souhaitable et capacité d'intégrer des approches moléculaires ou informatiques.
- Ouverture à l'interdisciplinarité et capacité de développer des collaborations avec les membres du Département.
- À l'entrée en fonction, développer un cours d'entomologie générale au premier cycle.
- Maîtrise de la langue française.*

Traitement

L'Université de Montréal offre un salaire concurrentiel jumelé à une gamme complète d'avantages sociaux.

Entrée en fonction

À compter du 1^{er} juin 2011.

Clôture du concours

Le dossier de candidature, constitué d'une lettre de motivation, d'un curriculum vitæ, d'un exemplaire de trois publications ou de travaux de recherche récents, d'un plan de recherche et

d'un exposé sur la philosophie d'enseignement et sur la gestion d'une collection entomologique, doit parvenir à l'adresse ci-dessous **au plus tard le 15 janvier 2011**.

Les candidats doivent également demander à trois personnes de faire parvenir une lettre de recommandation à la directrice du département à l'adresse suivante: **Bernadette Pinel-Alloul, directrice, Département de sciences biologiques, Université de Montréal, C. P. 6128, succursale Centre-ville, Montréal (Québec) H3C 3J7, Canada**

Les personnes intéressées trouveront des renseignements sur le Département de sciences biologiques et le Centre sur la biodiversité en consultant les sites Web suivant www.bio.umontreal.ca et http://www.biodiversite.umontreal.ca/index_en.htm.

* *Politique linguistique de l'Université de Montréal*

L'Université de Montréal est une université québécoise de langue française, à rayonnement international. Dans le cadre du renouvellement de son corps professoral, elle intensifie le recrutement des meilleurs spécialistes dans le monde et s'assure par ailleurs que, conformément à la Politique linguistique de l'Université de Montréal [http://www.direction.umontreal.ca/secgen/recueil/politique_linguistique.html], les professeurs qu'elle recrute qui ne maîtrisent pas le français à leur entrée en fonction bénéficient d'un programme de soutien à l'apprentissage de la langue française.

Privilège de confidentialité des candidatures

Les procédures de nomination en vigueur à l'Université de Montréal prévoient que tous les dossiers de candidature puissent être consultés par tous les professeurs membres de l'assemblée départementale. Toute personne désirant que sa candidature demeure confidentielle jusqu'à l'établissement de la liste restreinte (candidatures retenues pour entrevue) est priée de le mentionner dans sa lettre de motivation.

Programme d'accès à l'égalité en emploi

L'Université de Montréal souscrit au principe d'accès à l'égalité en emploi et invite les femmes, les membres des minorités visibles, les membres des minorités ethniques, les personnes handicapées et les autochtones à poser leur candidature. Nous invitons les candidats qui s'identifient à l'un ou l'autre de ces groupes à remplir le Questionnaire d'identification - accès à l'égalité en emploi, disponible à l'adresse suivante: www.fas.umontreal.ca/affaires-professorales/documents/quest-acces-emploi-FR.pdf, et à le joindre à leur dossier de candidature.

Exigences en matière d'immigration

Conformément aux exigences prescrites en matière d'immigration au Canada, cette annonce s'adresse en priorité aux citoyens canadiens et aux résidents permanents.



Fred Beaulieu

Is this an unusual bluebottle fly (*Calliphoridae*)? No. Its stiff abdominal setae and general appearance indicate it's a tachinid (*Archytas* sp.).

Postdoctoral Research Position in Insect Ecology

Position description:

A 2-year postdoctoral researcher position is available to work in the laboratory of Jay Rosenheim, University of California, Davis, on the population and community ecology of cannibalism in predatory insects. The research project is funded by a USDA-NIFA grant (2009-2013) whose goals are to deepen our understanding of how cannibalism shapes (i) predation risks experienced by individual predators, (ii) predator population growth rates, (iii) predator suppression of herbivore populations, and (iv) plant (crop) performance. A key part of the project will involve conducting artificial selection to establish lines of an omnivorous predator (*Geocoris pallens*) that express high and low levels of cannibalism, and then employing those lines in field experiments. There is, however, substantial flexibility for the postdoctoral researcher to develop his/her own particular interests in the behavioral, population, or evolutionary ecology of cannibalism in insects.

The position is available starting February 1, 2011. The initial appointment will be made for 1 year, with renewal contingent on satisfactory progress. The salary range will be \$37,740 – \$43 295, depending on experience, and the appointment also provides full medical coverage and vacation benefits.

For information on the Rosenheim lab, please see http://entomology.ucdavis.edu/faculty/rosenheim/Welcome_html

Qualifications:

- 1) PhD degree in ecology, entomology, or related discipline.
- 2) Proven ability to work as a productive and independent researcher.
- 3) Ability to supervise effectively the undergraduate research assistants or other research staff members who will collaborate on the project.
- 4) Familiarity with the behavior and ecology of predatory insects will be helpful, but is not an absolute requirement.

To apply, please send to Jay Rosenheim (jarosenheim@ucdavis.edu) a single .pdf document, including the following: a cover letter explaining your interest in the position, a CV, and the names of three persons who can be contacted for a reference letter.

MSc position – Raspberry pollination in Algonquin Park

We are looking for a MSc student to participate in a project investigating ecological interactions between plants and pollinators. The student will be working with a multi-disciplinary team of faculty members in the Department of Biology at Trent University. The project will involve an examination of the effects of pollinator diversity and abundance on patterns of fruit production in wild raspberry (*Rubus strigosus*).

Previous field experience is required, and a background in plant and/or pollinator ecology is preferred. Basic skills in plant and insect identification are also desired.

The student will be supported by a combination of research funding and teaching assistantships. Please send applications by e-mail to Marcel Dorken (marceldorken@trentu.ca) or Erica Nol (enol@trentu.ca). In the application, include a letter outlining your suitability for the position, a CV, and contact details for three referees. This position is available in May 2011.

Snow Bull.

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(where I also came out as a MSc) working on the taxonomy of chloropid flies. I'll let her introduce herself in more detail in one of the upcoming *Last word* columns.

Being Assistant Editor was fun and educational. First, I discovered that Adobe InDesign is a pretty handy program for preparing articles with nicely embedded images that can later be exported as a PDF or printed. Second, I learned a fair bit in formatting text and images to make things look good (we all have an inner artist, don't we?). Third, I got a closer peek at the entomologists' community from British Columbia to Newfoundland by communicating with them, or when reading and editing their numerous contributions to the *Bulletin*, such as the impressive lab profiles.

When I first received an issue of the *Bulletin* in 1998 during my MSc, it was a thinner, black & white (except the blue-sky cover), hard-copy only document with few photos. Through time it snowballed – with the help of some past editors, see *The Buzz*, [Vol. 41\(3\)](#) – into something more exciting. Besides the many gorgeous photos of bugs (thanks to Steve Marshall and other fine photographers) and of people to remind you who's who (oh, that's what Peter Mason looks like...and he's now the President!), the *Bulletin* offers some gems of knowledge and inspiration. Some of the basics of entomological science can be learned or re-learned here, e.g. through the blunt and twisted columns of *Moth balls* and *Dear Buggy* (the latter unusually absent in this issue), such as how to make an identification key – or how not to, as the *Moth ball* guru usually puts it – and how to avoid painful bumps in the publication process of a paper. If some of you old dogs (allusion to Cedric's previous *Last word*) are not learning much anymore, then at least you might have some laughs with those columns (and possibly even be brought to tears by *Moth balls*, which, by the way, made the whole proof-reading phase particularly less painful for me). The *Student wing* has rich content and is valuable for all students. But I

Bull. de neige

(suite de la page 248)

à tous un artiste intérieur, n'est-ce pas?). Troisièmement, j'ai eu un bon aperçu de la communauté des entomologistes de la Colombie-Britannique à Terre-Neuve en communiquant avec eux, ou en lisant et en éditant leurs nombreuses contributions au *Bulletin*, comme les impressionnants profils de labo.

Quand j'ai pour la première fois reçu un numéro du *Bulletin* en 1998 durant ma maîtrise, c'était un document plus mince, en noir et blanc (sauf pour la couverture en bleu ciel), en copie papier seulement et avec peu de photos. Avec le temps il a fait boule de neige – avec l'aide de quelques rédacteurs précédents, voir *Bourdonnements*, [Vol. 41\(3\)](#) – et s'est transformé en quelque chose de plus excitant. À part les superbes photos de bestioles (grâce à Steve Marshall et autres photographes doués) et de gens pour vous rappeler qui est qui (oh, c'est à ça que ressemble Peter Mason...et il est maintenant le Président!), le *Bulletin* offre quelques petits trésors de connaissances et d'inspiration. Quelques rudiments de la science entomologique peuvent être appris ou réappris ici, par exemple avec les colonnes franches et perverses de *Boules à mites* et *Cher Bibitte* (cette dernière étant, exceptionnellement, absente dans ce numéro), comme comment construire une clé d'identification – ou comment ne pas, comme le guru de *Boules à mites* le dit généralement – et comment éviter des secousses difficiles durant le processus de publication d'un article. Si certains de vous vieux singes (allusion au *Dernier mot* précédent de Cedric) n'apprennent plus beaucoup à présent, alors au moins pourriez-vous rire un peu durant la lecture de ces colonnes (et même peut-être rire aux larmes avec *Boules à mites*, qui, en passant, a fait de la correction d'épreuve un stade beaucoup moins pénible pour moi). *L'aile étudiante* a un contenu riche et est intéressante pour tous les étudiants. Mais je conseille à tout étudiant de lire au-delà de cette rubrique, comme *Cher Bibitte* et *Boules à mites*, incluant les colonnes précédentes si vous avez osé en manquer (voir la compilation des titres de *Boules à mites* dans le [Vol. 42\(2\)](#), [juin](#)

advise any student to read beyond that section, such as *Dear buggy* and *Moth balls*, including the past columns if you dared miss any (see a compilation of *Moth ball* titles in [Vol. 42\(2\), June 2010](#)). Also, *Upfront*, authored invariably by our President, can be motivating and usually brightly captures what's happening in our Society. More inspiring stuff (and I'm not joking here) can be found in: the *Gold Medal Address*, and...*In memory*. The stories shared in these two sections of the *Bulletin* are both moving and mind-opening. Some entomologists have had impressive carriers, and the why, how and how much they went into certain paths of research or entomological work can be mind-blowing. The now more frequent *Special features* unveil funky insect behaviours (e.g. ants sticking to glass, [Vol. 42\(3\)](#)), describe special local faunas (e.g. introduced Alberta spiders, [Vol. 42\(1\)](#)), or give some aspects of the origin of our Society (see [Vol. 42\(2\)](#)) (and I could go on with more intriguing examples) that are not often, or not as easily published elsewhere. *Book reviews* and *Announcements* examine some of the recent key publications and important news such as job openings, while *Society Business* describes changes and actions within our Society. In brief, the *Bulletin* is somewhat an essential read for Canadian entomologists. Again, past issues are not a thing of the past. They are neatly stored electronically by our webmaster Rick West, for all (including non-ESC members) to download and enjoy. Merry Christmas to all that are helping to make the *Bulletin* what it is. Oh, and Happy New Year to all our steady, and less steady readers.

[2010](#)). Aussi, *À propos*, rédigé invariablement par notre Président, peut être motivant et d'habitude synthétise élégamment ce qui se passe dans notre Société. Plus de trucs inspirant (et je ne blague pas ici) se trouvent dans: l'*Allocution du Médaille d'or*, et...*En souvenir de*. Les histoires partagées dans ces deux rubriques du *Bulletin* sont émouvantes et inspirantes. Certains entomologistes ont eu une carrière impressionnante, et le pourquoi, le comment et à quel point ils sont allés dans certaines directions durant leurs recherches ou leurs travaux entomologiques peuvent être fascinants. Les *Articles spéciaux*, maintenant plus fréquents, nous dévoilent des comportements étonnants (par ex., des fourmis qui collent à la vitre, [Vol. 42\(3\)](#)), décrivent des faunes locales spéciales (par ex. les araignées introduites d'Alberta, [Vol. 42\(1\)](#)), ou présentent certains aspects de l'origine de notre Société (voir [Vol. 42\(2\)](#)) (et je pourrais continuer avec des exemples plus intrigants) qui ne sont pas souvent, ou pas aussi facilement publiés ailleurs. *Critiques de livres* et *Annonces* examinent quelques publications-clés récentes et des nouvelles importantes comme des ouvertures de postes, tandis que *Affaires de la Société* décrit les changements ou les actions prises à l'intérieur de notre Société. Bref, le *Bulletin* est en quelque sorte une lecture essentielle pour les entomologistes canadiens. Encore une fois, les numéros précédents ne font pas partie du passé. Ils sont bien entreposés électroniquement par notre webmestre Rick West, pour être téléchargés et savourés par tous (incluant les non membres de la SEC). Joyeux Noël à tous ceux qui aident à faire du *Bulletin* ce qu'il est. Oh, et Bonne Année à tous nos lecteurs réguliers et moins réguliers.



Steve Marshall

The Common Snow Flea, *Hypogastrura nivicola* (Collembola).

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E-mail: david.ostermann@agr.mb.ca
<http://home.cc.umanitoba.ca/esm/>

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<http://www.entsocont.ca>

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Université du Québec à Montréal
Département des sciences biologiques
C.P.8888, Succ. Centre Ville, Montréal (Qc) H3C 3P8
Tél: (514) 987-3000 ext. 4799
E-mail: secretariat@seq.qc.ca
<http://www.seq.qc.ca/>

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President Christine Norona
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Atlantic Forestry Centre
P.O. Box 4000, 1350 Regent Street South
Fredericton, NB, E3B 5P7
Tel: (506) 452-3785
E-mail: Rob.Johns@NRCan-RNCan.gc.ca
<http://www.acadianes.org/index.html>

Editor's note: Society Directors and Officers are reminded to check these lists, and submit corrections, including the names and positions of new officers.

Bulletin of the Entomological Society of Canada

Editor: Cedric Gillott
Assistant Editor: Fred Beaulieu

The *Bulletin of the Entomological Society of Canada*, published since 1969, presents quarterly entomological news, opportunities and information, details of Society business, matters of wider scientific importance and book reviews.

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393 Winston Ave.
Ottawa, Ontario, Canada K2A 1Y8
www.esc-sec.ca/
entsoc.can@bellnet.ca

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Send correspondence to:
Cedric Gillott
Bulletin Editor
Department of Biology
University of Saskatchewan
112 Science Place, SK S7N 5E2
Telephone: (306) 966-4401
Fax: (306) 966-4461
E-mail: cedric.gillott@usask.ca

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Bulletin de la Société d'entomologie du Canada

Rédacteur: Cedric Gillott
Rédacteur adjoint: Fred Beaulieu

Le *Bulletin de la Société d'entomologie du Canada*, publié depuis 1969, présente trimestriellement des informations entomologiques, des occasions, des renseignements sur les opérations de la Société, des dossiers scientifiques d'importance et des analyses d'ouvrages.

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www.esc-sec.ca/
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La Société d'entomologie du Canada a été établie en 1863 principalement pour promouvoir l'étude et l'avancement de l'entomologie. Elle soutient l'entomologie par l'entremise de publications, de réunions et d'autres activités.

Envoyer vos soumissions à:
Cedric Gillott
Rédacteur du *Bulletin*
Department of Biology
University of Saskatchewan
112 Science Place, SK S7N 5E2
Telephone: (306) 966-4401
Fax: (306) 966-4461
courriel : cedric.gillott@usask.ca

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Snow Bull.

Three years ago, Kevin Floate welcomed me into the (two-man!) editorial team of the *Bulletin*. In two years under his supervision, I learned a few technical aspects, sure, but the most rewarding for me were the insights I gained while observing him dealing with editorial and human issues. I figured that common sense, patience, balance (between time, quality, expenses, etc.), efficient decision-making, and committedness, are some qualities a good editor should have. Not so surprisingly given that he was Kevin's supervisor, Cedric Gillott showed me similar qualities since he started as *Bulletin Editor* almost a year ago. Besides learning human skills with my chief editors, I even began a collaboration with Kevin on mites associated with dung beetles. Things can snowball through the *Bulletin*. If you read it; write in it; or get involved in the ESC no matter how.

This is my last issue as the *Bulletin* Assistant Editor. Luckily for Cedric and the ESC, a new, sharp assistant editor is coming in to replace me: Julia Mlynarek. Julia got her MSc from Terry Wheeler's lab at McGill University

(continued on page 244)

Bull. de neige

Il y a trois ans, Kevin Floate m'a souhaité la bienvenue dans l'équipe de rédaction du *Bulletin* (formée de deux personnes!). Sous sa supervision durant deux ans, j'ai appris quelques aspects techniques, bien sûr, mais le plus gratifiant fut pour moi l'intuition que j'ai acquise en l'observant traiter de problèmes éditoriaux et humains. J'ai compris que le bon sens, la patience, l'équilibre (entre le temps, la qualité, les dépenses, etc.), une prise de décision efficace, et le sens de l'engagement, sont quelques qualités qu'un bon rédacteur devrait avoir. Pas très étonnamment puisqu'il a été le superviseur de Kevin, Cedric Gillot m'a démontré des qualités semblables depuis qu'il a débuté en tant que rédacteur du *Bulletin* il y a presque un an. À part apprendre sur les qualités humaines grâce à mes rédacteurs en chef, j'ai même entamé une collaboration avec Kevin sur les acariens associés aux coléoptères coprophages. Les choses peuvent faire boule de neige grâce au *Bulletin*. Si vous le lisez; si vous écrivez dedans; ou si vous vous impliquez dans la SEC d'une manière ou d'une autre.

Ceci est mon dernier numéro en tant que rédacteur adjoint du *Bulletin*. Par chance pour Cedric et pour la SEC, une nouvelle, enthousiaste rédactrice adjointe s'en vient pour me remplacer: Julia Mlynarek. Julia a obtenu son MSc au labo de Terry Wheeler à l'Université McGill (d'où j'ai également obtenu mon MSc) en travaillant sur la taxonomie des mouches chloropidés. Je vais la laisser se présenter en plus de détails dans une des colonnes à venir de *Dernier mot*.

Être rédacteur adjoint a été amusant et éducatif. Premièrement, j'ai découvert que Adobe InDesign est un programme pas mal utile pour préparer des articles avec de jolies images intégrées qui peuvent par la suite être exportés en PDF ou imprimés. Deuxièmement, j'ai pas mal appris sur la mise en forme de textes et d'images pour que les choses tapent à l'œil (on

(suite à la page 244)

Entomological Society of Canada, 2010-2011

Société d'entomologie du Canada, 2010-2011

Executive Council / Conseil exécutif

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Peter Mason
Agriculture and Agri-Food Canada
960 Carling Avenue, Ottawa, ON K1A 0C6
Tel: (613) 759-1908, Fax: (613) 759-1926
E-mail: peter.mason@agr.gc.ca

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1055 rue du P.E.P.S., C.P. 10380, Succ. Sainte-Foy, Québec, QC G1V 4C7
Tel: (418) 648-3944, Fax: (418) 648-5849
E-mail: michel.cusson@RNCAN-NRCAN.gc.ca

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Rosemarie DeClerck-Floate
Agriculture and Agri-Food Canada
5403 - 1 Avenue South, PO Box 3000
Lethbridge, Alberta T1J 4B1
Tel: (403) 317-2270, Fax: (403) 382-3156
Email: Rosemarie.Declerck-Floate@agr.gc.ca

Past President / Présidente sortante

Maya Evenden
CW 405 Biological Sciences Centre
University of Alberta
Edmonton, AB T6G 2E9
Tel: (780) 492-1873, Fax: (780) 492-7150
E-mail: mevenden@ualberta.ca

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Chandra Moffatt
University of British Columbia
E-mail: chandra.moffat@gmail.com

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Annabelle Firlej
Institut de Recherche en Biologie Végétale
4101 Sherbrooke Est, Montréal, QC H1X 2B2
Tel: (450) 441-4654
E-mail: afirlej@yahoo.com

Bulletin Editor / Rédacteur du Bulletin

Cedric Gillott
Dept of Biology, University of Saskatchewan
112 Science Place, SK S7N 5E2
Tel: (306) 966-4401, Fax: (306) 966-4461
E-mail: cedric.gillott@usask.ca

Ass. Bulletin Editor / Rédacteur adj. du Bulletin

Fred Beaulieu
Agriculture and Agri-Food Canada
960 Carling Avenue, Ottawa, ON K1A 0C6
Tel: (613) 759-1789, Fax: (613) 759-1927
E-mail: frederic.beaulieu@agr.gc.ca

Webmaster / Webmestre

Rick West
31 Drover's Heights
Portugal Cove-St. Philips, NL A1M 3G6
Tel: (709) 895-2734
E-mail: reely.west@nl.rogers.com

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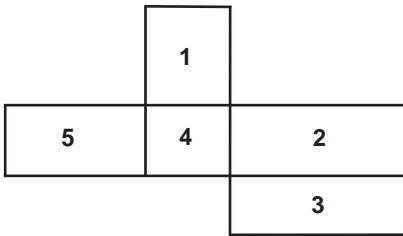
Robb Bennett
Tel: (250) 370-5015, Fax: (250) 652-4204
E-mail: rbennett@esc-sec.ca

Division Editors / Rédacteurs de division

Gilles Boiteau, E-mail: gilles.boiteau@agr.gc.ca
Chris Buddle, E-mail: chris.buddle@mcgill.ca
Yvan Pelletier, E-mail: yvan.pelletier@agr.gc.ca
Brad Sinclair, E-mail: bradley.sinclair@inspection.gc.ca

Head Office / Siège social

Derna Lisi (Office manager)
Entomological Society of Canada
393 Winston Ave., Ottawa, ON K2A 1Y8
Tel: (613) 725-2619, Fax: (613) 725-9349
E-mail: entsoc.can@bellnet.ca, www.esc-sec.ca/



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Return Undeliverable Canadian Address to:
 Entomological Society of Canada
 Société d'entomologie du Canada
 393 Winston Avenue
 Ottawa, Ontario, Canada K2A 1Y8
 E-mail: entsoc.can@bellnet.ca

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Images

On the spine: *Cyphocleonus achates* (Fahraeus) (Coleoptera: Curculionidae) is a root feeding weevil introduced into Canada for the biological control of non-native species of knapweed (*Centaurea* spp.). Photo: B. Van Hezewijk

Beneath the title: *Alucita adriendenisi* (Landry & Landry) (Lepidoptera: Alucitidae), found across much of Canada, was named in honour of Adrien Denis who assisted Carl Atwood, the father of Margaret Atwood, in his entomological work and left a significant impression on the Atwood family. Photo: J. Dombroskie

1 Caterpillar of the spurge hawk-moth, *Hyles euphorbiae* (L.) (Lepidoptera: Sphingidae), on leafy spurge (*Euphorbia esula* L.), Spruce Woods Provincial Park, Manitoba. Photo: A. Leroux

2 Mating flesh flies (Diptera: Sarcophagidae), Gatineau Park, Quebec. Photo: M. Larrivé

3 *Piagetiella peralis* (Leidy) (Phthiraptera: Menoponidae), a parasite found in the pouch of American white pelican (*Pelecanus erythrorhynchus*). Photo: T. Galloway

4 Collecting parasitoids of the cabbage seedpod weevil, *Ceutorhynchus obstrictus* (Marsham) (Coleoptera: Curculionidae), in Swiss canola (*Brassica* sp.) fields. Photo: T. Haye

5 A highly ornamented soil mite from native grasslands in Alberta (Prostigmata: Stigmaeidae). Photo: H. Proctor

Back cover: A round-headed apple tree borer, *Saperda candida* (Fabricius) (Coleoptera: Cerambycidae) near Peterborough, Ontario. Individuals of this species vary in the predominance of light (as in this specimen) or dark stripes. Photo: J. Fitzsimmons

Français à l'intérieur de la couverture avant