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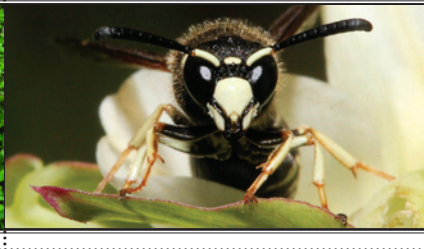

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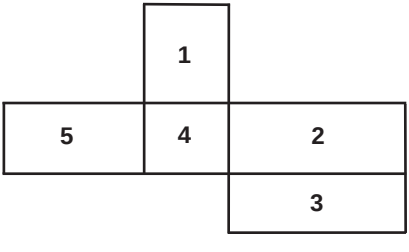

Up front / Avant-propos

Maya Evenden, President of ESC / Présidente de la SEC

As it was originally envisioned in 1863, the Entomological Society of Canada (ESC) is a home for all "students and lovers of entomology". The ESC is a voice to promote entomology, in all its facets, across Canada and indeed around the world. The multidisciplinary nature of our profession was highlighted at the recent Joint Annual Meeting in Winnipeg where the symposia ran the gamut from climate change and its effects on insects to the role of arthropods in nutrient cycling, pollination biology and the application of our findings to pest management. Such diverse topics were appreciated by all in attendance because of our ability to use the "insect as the integrator" (Neil Holliday 2009, Gold Medal Address). The 2009 JAM was a great success thanks to an outstanding organization committee and the >220 attendees, one third of who were students. Students are the future of our society and their attendance at meetings and participation in the society is valued by us all.

It is a great honour to serve as the ESC president for 2010. I have been a member of the ESC since my graduate student days at Simon Fraser University in the early 1990s and the friends and contacts I have made through

La Société d'entomologie du Canada (SEC) est devenue, telle qu'elle avait été envisagée en 1863, une maison pour tous les « étudiants et amoureux de l'entomologie ». La SEC est une voix qui permet de promouvoir l'entomologie et toutes ses facettes à travers le Canada et, évidemment, autour du monde. La nature pluridisciplinaire de notre profession a été mise en évidence lors de la dernière réunion annuelle conjointe à Winnipeg, où les symposiums ont couvert une large gamme de sujets, des changements climatiques et de leurs effets sur les insectes au rôle des arthropodes dans le cycle des nutriments, en passant par la biologie de la pollinisation et l'application de nos découvertes sur la gestion des ravageurs. Ces sujets variés ont été appréciés par l'audience grâce à notre capacité à utiliser les « insectes comme intégrateur » (Neil Holliday 2009, discours de la Médaille d'or, prononcé en anglais). La réunion conjointe annuelle 2009 a été un grand succès grâce à un extraordinaire comité organisateur et de plus de 220 participants, dont un tiers composé d'étudiants. Les étudiants sont le futur de notre société et leur présence aux réunions et leur participation dans la société sont appréciées par nous tous.

Il s'agit d'un grand honneur pour moi de servir en tant que présidente de la SEC pour 2010. Je suis membre de la SEC depuis mes études graduées à l'Université Simon Fraser au début des années 1990 et les amis et les contacts que je me suis faits par le biais de la société et des sociétés régionales ont influencé ma carrière. Il y a de nombreux avantages à faire partie d'une société: des frais de conférences réduits, l'accès à la section des membres du site Internet, l'accès aux numéros électroniques et aux numéros antérieurs de *The Canadian Entomologist* (*TCE*), des frais de pages réduits dans *TCE* et, bien sûr, le réseautage avec des collègues entomologistes, pour ne nommer que ceux-là. Malgré ces avantages, le nombre d'adhésion a décliné en 2009 et nous devons

the society and the regional societies have shaped my career. There are many benefits to belonging to the society such as: reduced conference fees, access to the members area of the website, access to the digital issues and back issues of *The Canadian Entomologist* (*TCE*), reduced page charges in *TCE*, and of course networking with fellow entomologists, to name a few. Despite these benefits, membership numbers declined in 2009 and we need to find ways to reverse these trends. Our web content committee, chaired by Michel Cusson, and our webmaster Rick West are working hard with our office manager Derna Lisi to implement a new interactive database project that will allow members to sign up and renew membership online. Look for these new features on our website in the coming year!

An integral part of our society is the publication of *TCE*. All of the back issues of *TCE* and the *Memoirs of the ESC* have recently been scanned and are now available to members online. This great resource is available for purchase to institutional subscribers and I urge all ESC members to inform the librarians at their institutions of this opportunity. Robb Bennett and the editorial board of the *TCE* have been promoting the CP Alexander Review series in the journal. As a result, several topical review papers will be published this year.

I look forward to serving as ESC president and collaborating with the hard-working team that makes up the executive, governing board, the trustees and the committee members. However, a society is made up of all its membership and I encourage all of you to become active in the Society through attendance at meetings, use of the website, submission of articles to our publications and dissemination of ideas on how to continue to promote entomology and the lovers of entomology in Canada.

trouver une façon de renverser cette tendance. Notre comité du contenu Internet, présidé par Michel Cusson, et notre webmestre, Rick West, travaillent fort avec notre directrice de bureau, Derna Lisi, afin d'implémenter un nouveau projet de base de données interactive qui permettra aux membres de s'inscrire et de renouveler leur adhésion en ligne. Surveillez ces nouveautés sur notre site Internet dans la prochaine année!

Une partie importante de notre société est la publication de *TCE*. Tous les numéros antérieurs de *TCE* et des *Memoirs of the ESC* ont récemment été numérisés et sont maintenant disponibles aux membres en ligne. Cette grande ressource peut également être achetée par les membres institutionnels et je convie tous les membres de la SEC d'informer les libraires de leurs institutions de cette opportunité. Robb Bennett et le comité éditorial du *TCE* ont promu la série de revues CP Alexander. Par conséquent, de nombreux articles de revue seront publiés cette année.

J'ai hâte de servir en tant que présidente de la SEC et de collaborer avec l'équipe motivée qui forment le conseil exécutif, le conseil d'administration, les fiduciaires et les membres des comités. Cependant, la société est formée par ses membres et je vous encourage tous à devenir un membre actif de la Société par le biais de la participation aux réunions, l'utilisation du site Internet, la soumission d'articles dans nos publications et la dissémination d'idées sur les moyens de continuer à promouvoir l'entomologie et les amoureux d'entomologie au Canada.

Moth balls / Boules à mites

By Andrew Bennett

The Good Ship Ento-Pop

Far be it from me to turn this column into my own private gripe session against anything resembling inconvenience to me – but I have a complaint. OK, perhaps not a complaint – more of an exasperated observation. One of my duties as a curator at the Canadian National Collection of Insects, Arachnids and Nematodes (CNC) is to loan our specimens to qualified researchers around the world. Preparing the paperwork and shipping specimens out is one of those tasks that must be done, and CNC benefits immensely when specimens are returned in a better state of curation than when they were loaned out. This is not my complaint. My grievance revolves around the procedures required to get said specimens from our collection to those wishing to borrow them. This process was certainly made more arduous by increased security measures following 9/11. More recently, additional obstacles have arisen that one must furculate in order to ship specimens. (OK, furculate isn't really a word but it should be). These new procedures relate to the Convention on Biological Diversity (CBD) and the concept of Access and Benefit Sharing (ABS) of genetic material. Whereas ABS makes sense for commercial purposes (i.e., if you breed a championship race horse, you should get bags of money when you sell the offspring), this concept can have severe, negative consequences for non-commercial purposes (i.e. research for the public good). For example, in some countries such as India, the government is refusing to send back loaned material (either living or dead) to institutions if the specimens were collected in India. This has caused an almost complete halt to taxonomic study of Indian material by non-Indian scientists, and the people hurt most by this decision are Indian taxonomists, not to mention, the people of India. With respect to the scope of specimens covered by the CBD, some brainiac decided that because there is DNA in dead arthropods, they should also be considered genetic resources – thus requiring the same level of scrutiny (and paperwork) as live orchids, novel organic-based drugs and giant pandas. Along this vein, the European Community has even gone as far as to begin classifying dead insects as ANIMALS! Outrageous you say? I agree, mostly because now an additional import permit is required if researchers in Europe wish to borrow dead insect specimens from CNC or anywhere else outside the EC. Where will this madness end?

Regardless of how one's organisms are classified, the biggest problem we entomologists face is that we work with insects. To the average customs agent or bureaucrat, insects are bad. They eat crops, spread disease and generally cause people a lot of trouble. And no matter how much

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

one emphasizes the word **dead** on a customs or import form, all that the customs agent sees is the word INSECT and all of a sudden up go the road blocks and out comes the "I'm just doing my job" routine. So what can be done?

In theory, I could have written an article with clever flow charts that summarized current practices around the world, along with helpful guidelines and contact numbers of smiling people waiting to offer assistance. But puh-lease! Nothing short of clairvoyance is going to help us comply successfully with the ever-changing regulations thrust upon us by the myriad security agencies and governments of the world. No, what we need to do is think outside the box (Schmitt or otherwise) and come up with resourceful ways to ensure that our specimens are not treated as toxic or biohazardous. If bureaucrats are going to do something crazy like start classifying dead insects as animals, then we need to change their perception of our specimens so they view them as nothing more worrying than a friendly smile.

The fact is that every day, millions of dead insects (or at least bits of dead insects) travel around the world, crossing borders and making it safely to their destinations. How is this done? Why, inside food, of course. Somehow, entomologically-enhanced food and drink gets dealt with completely differently than dead specimens for scientific research. A clever entomologist could use this little loophole to send specimens safely by mail or, if preferred, to hand-carry specimens on planes. Here are some examples how my foolproof plan would work:

a) Chocolate coated holotypes (also suitable for other rare or priceless specimens). First you need to convince your colleague in the electron microscopy lab that it is a really great idea to fill his sputter-coater-machine-thingy with liquid chocolate. Following an exhilarating session in the sputter chamber, allow your specimens to dry and then place them gently in an empty chocolate box. As an added touch, you could personalize each specimen depending on taxon (e.g., cerambycids are in dark chocolate with a clockwise milk chocolate swirl, elaterids have vanilla sprinkles, etc.). All that would then be required would be to fill in the customs form stating that the contents are "assorted chocolates" (not untruthful in any way) and your package should be ready to send.

b) Glen Mantodea Single Malt Whiskey (for hand-carrying insect trap residues or ethanol-preserved insects on planes). First you need to purchase a Scottish single malt distillery (shouldn't be too difficult given the recent economic downturn). Some judicious forging of historical documents should convince the locals that the previous name was incorrect and that the valid name (Glen Mantodea or almost any other Scottish-sounding-multi-syllabic insect name) was usurped by the thieving English and has now been rightfully restored (Mention of the Battle of Bannockburn is sure to help in this transition). You will need to design a label (perhaps something slightly reminiscent of Scotland, for example, an island fortress in a loch with a few bag-pipe playing, kilt-wearing highlanders … being decapitated by a giant mantis). Next, for the back of the bottle/ outside of the box you need to fabricate a story about the rich history of the distillery (key words: cold, dark, rainy, depressing, raptorial legs) and most importantly, describe the distinctive taste of the product (e.g., earthy, with little crunchy bits and a lingering finish that sticks in the throat). Now all you need is some ethanol, an empty one litre whisky bottle, your insects, a bottle capper and you're ready to travel the world with any ethanol-preserved specimens you choose!

c) Insect smoothies and other frozen treats (for morphology-optional specimens). With DNA barcoding becoming more and more prevalent, the need to check whether your specimens have wings, legs or other diagnostic features will soon be a silly waste of time. Take one part ice cream, one part milk and one part research material, blend thoroughly and freeze. Now rent

a refrigerated tractor trailer, pass an advanced driving course and the appropriate licensing tests and in no time at all, you can easily transport almost limitless amounts of high quality, pureed insects anywhere in the continent. Learn how to pilot a 500,000 ton container ship or a Boeing 747 and the world is your oyster (or ento-sickle, as the case may be). And if overzealous border guards stop you, practice saying in a dramatic, worried-sounding voice, “my ice cream is starting to melt…”.

I hope it’s clear that the few simple steps detailed above will make worries about movement of insect specimens between institutions a thing of the past. For those of you cynics who think that this doesn’t solve anything, try even FINDING the correct European Community Import Form on the web (let alone filling it in correctly). Then you’ll see how much simpler my suggested alternatives could be.

Join me next issue for continued guidance on the import and export of partly frozen *Moth Balls*.

Steve Marshall

Norman Criddle Award 2009 / Le Prix Norman Criddle 2009

The 2009 recipient of the Norman Criddle Award is Dr Robert E. Wrigley. Bob Wrigley receives the award in recognition of his contribution to the Entomological Society of Manitoba and entomologists in the province, as well as to the furthering of entomological knowledge and understanding by the general public.

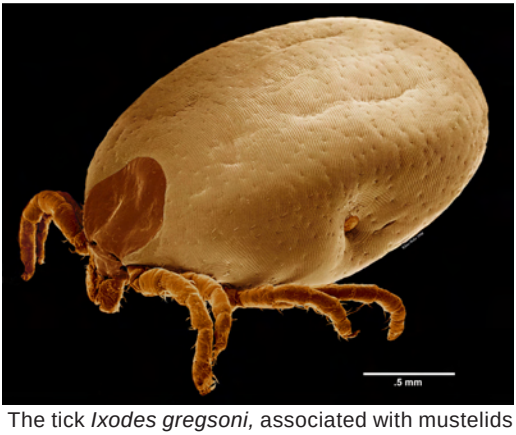
Bob was trained and has worked as a mammalogist throughout his career. He obtained his BSc and MSc from McGill University in Montreal, and his PhD from the University of Illinois in Urbana-Champaign. During his undergraduate and graduate years, he worked on both large and small mammals. On finishing his training, he became the Curator of Mammals and Birds at the Manitoba Museum of Man and Nature in Winnipeg. Currently he is the Curator at the Winnipeg Zoo, where most of his charges are vertebrates.

Throughout his time in Manitoba, he has also shown a very active interest in insects, and has supported the entomological community in many ways. Most summers, with other enthusiastic amateurs, he embarks on ambitious insect-collecting trips across Canada and the United States, about which he writes fascinating and lively articles, submitting them regularly to the ESM Newsletter. The specimens from these and other trips he makes, he carefully prepares, labels and identifies; ultimately he donates many of them to the J.B. Wallis Museum in the Department of Entomology at the University of Manitoba. To date he has donated specimens valued at over $50,000, an important contribution to the collection. He has on several occasions hosted “Beetle Night”, an event at which he brings together amateur and professional Manitoba coleopterists, some coming from as far away as The Pas for the event. He has done numerous radio and TV spots focusing on insects as well as the other organisms he is so interested in and knowledgeable about. He also contributes often to educating children on the wonders of insects. For example, many of the most beautiful and exotic specimens in the display “Incredible Insects” at the Manitoba Children’s Museum were his. Insects have only formed a very small part of Bob’s professional responsibilities, but they are clearly a big part of his interests, and with his energy, enthusiasm and abilities, he has made a major contribution to Entomology in Manitoba.

Le récipiendaire du prix Norman Criddle de 2009 est Dr Robert E. Wrigley. Bob Wrigley a reçu ce prix en reconnaissance de sa contribution à la Société d'entomologie du Manitoba et aux entomologistes dans la province, ainsi qu'à l'avancement des connaissances et de la compréhension de l'entomologie par le grand public.

Bob a été formé et a travaillé en tant que mammalogiste tout au long de sa carrière. Il a obtenu son BSc et son MSc de l'Université McGill à Montréal, et son PhD de l'Université de l'Illinois à Urbana-Champaign. Durant ses études de premier cycle et de cycles supérieurs, il a travaillé sur les grands et les petits mammifères. À la fin de ses études, il est devenu curateur des mammifères et oiseaux au Musée manitobain de l'homme et de la nature à Winnipeg. Il est présentement curateur au Zoo de Winnipeg, où il s'occupe principalement des vertébrés.

Tout au long du temps passé au Manitoba, il a montré un intérêt très actif envers les insectes et a supporté la communauté entomologique de multiples façons. Lors de la plupart des étés, il est parti dans des voyages ambitieux de récoltes d'insectes au Canada et aux Etats-Unis en compagnie d'amateurs enthousiastes. Il a d'ailleurs écrit des articles fascinants et vivants suite à ces voyages, les soumettant régulièrement à la ESM Newsletter. Les spécimens provenant de ces voyages ont été préparés, étiquetés et identifiés par lui-même, et il a fait don de la majorité de ces insectes au J.B. Wallis Museum du département d'entomologie de l'Université du Manitoba. Jusqu'à maintenant, il a fait don de spécimens dont la valeur totale est de plus de 50 000$, une importante contribution à la collection. Il a hébergé à de multiples occasions la 'Beetle Night', un événement durant lequel il réunissait des coléoptéristes amateurs et professionnels du Manitoba, certains venant d'aussi loin que Le Pas pour l'événement. Il a fait de nombreux passages à la radio et à la télé où il s'est principalement concentré sur les insectes autant que sur d'autres organismes auxquels il s'intéresse et qu'il connaît. Il a également contribué fréquemment à l'éducation des enfants aux merveilles des insectes. Par exemple, la majorité des spécimens magnifiques et exotiques dans la section 'Incredible Insects' au Musée des enfants du Manitoba étaient les siens. Les insectes ne représentent qu'une petite partie des responsabilités professionnelles de Bob, mais ils constituent clairement une grande partie de ses intérêts et il a contribué de façon majeure à l'entomologie au Manitoba avec énergie, enthousiasme et habileté.



Klaus Bolte

The tick *Ixodes gregsoni,* associated with mustelids in North America.

The John Spence Lab, University of Alberta, Edmonton

John R. Spence

Our 'Invertebrate Ecology' lab in the Department of Renewable Resources is a highly interactive place, generally filled with folks enthusiastic about the many "little things that run the world". My own interests are wildly broad, embracing just about anything having to do with the natural history, evolution and classification of invertebrates, their roles in ecological systems and why people in general should care about these things. We like field experiments best, but will do whatever is likely to increase reliable understanding of the above topics – and this can involve pretty darn zany activities. Imagination and creativity, as opposed to somebody's dry rules about science, are often key to answering our questions. My education has been broad; a BA from Washington & Jefferson College, a MSc from the University of Vermont, a PhD from the University of British Columbia, and a Killam PDF here at the University of Alberta. The best part is that it continues under the direction and encouragement of the students and colleagues with whom I have been lucky to 'work' (if you want to call it that). The biochemist father of a dear friend once told us, "*You never finish a research project; they go on forever … in instalments*", and I now know he was right. My own personal objects of interest are beetles (especially black or boringly brown ones!) and semi-aquatic creatures of all sorts, but I have no difficulty in imagining that students are just as interested in taxa of their own choice. Thus, I try to help determined students with special interests to pursue them if they fit under our broad umbrella. Of late our main lab focus has been in biodiversity, ecology and entomology, presently centered on the large-scale Ecosystem Management Emulating Natural Disturbance (EMEND) experiment that examines sustainable forest management in northwestern Alberta. We also study the life-history evolution and population dynamics of semi-aquatic bugs and spiders. Students interested in working in a cooperative and mutually supportive environment, wide-ranging discussions, bluegrass music, lamb or pig roasts and campfire stargazing do best in our lab. My efforts with students are augmented and improved by frequent co-supervision with Drs. David Langor and Jan Volney of the Canadian Forest Service (Edmonton) and Héctor Cárcamo of Agriculture & Agri-Food Canada (Lethbridge). Having the lab to watch, fiddle and marvel in has made the job of being a department Chair bearable – perhaps even possible.

Suzanne Abele, MSc student

I study snail and slug communities under the co-supervision of Dr. Ellen Macdonald. More specifically, my work looks at the impacts of partial and complete harvesting on gastropod distribution patterns. My research is part of the larger EMEND project. I am hoping that my research contributes to overall goals of biodiversity management in relation to conservation of relatively sedentary and little studied forest organisms. Although I don't study insects, the Spence lab, with its love for all things creepy crawly, has become the perfect place to develop a love for invertebrate ecology. (sabele@ualberta.ca)

Colin Bergeron, PhD student

Growing up in a small community of the Gaspé peninsula in eastern Québec, I was always fascinated by the diversity of plants and animals I discovered during my wanderings. This led me to expand my knowledge of biological wonders at university and further develop societal understanding of nature through a PhD program at the University of Alberta in partnership with the Canadian Forest Service. I work in close collaboration with forest industries and rural communities of northwestern Alberta on a project that ought to highlight the importance of natural disturbances in maintaining biodiversity of insects in the boreal forest. With the help of

dendrochronology and entomology, I have shown that north-facing slopes in north-western Alberta act as fire refugia for species that require a characteristic habitat resulting from long fire-return intervals. I have also helped develop a landscape surrogate system for large scale biodiversity conservation and recently described a new species of rove beetle. Beside the outdoors, my interests include playing my fiddle, cooking, sports and beer. (cb1@ualberta.ca)

Stéphane Bourassa, Lab coordinator

I moved to Lethbridge AB from a small town near Montreal in 2000 to do an undergraduate degree in Biochemistry and to improve my English. It was only during my last year of undergrad that I was introduced to the world of entomology. I then started working as a carabid taxonomist which fed my growing passion for those beetles. In 2004, soon after I graduated, I started a MSc under the supervision of John Spence and Héctor Cárcamo where I looked at the agroecology of carabids. I did my entire field work in southern Alberta but took my classes at the University of Alberta, in Edmonton. I currently have the privilege to work as the lab coordinator for John Spence. It is a very nice position where I get to help and learn on a variety of projects (thanks to all the motivated grad students in our lab!) as well as pursue my own research. Although my main interest remains the ecology of carabids, I also do a lot of interesting work on water striders. My other, non academic interests include biking, climbing, cross country skiing, brewing beer and playing music. (sb22@ualberta.ca)

Charlene Wood

Saproxylic cucujid beetle *Cucujus clavipes* on an aspen log

Jason Edwards, Research technologist

I graduated in 2001 with a BSc Specialization in Environmental Biology (Ecology) from the University of Alberta. Since then I have worked as the Field Coordinator with the EMEND Project. My primary role is to direct "Core Research" at the EMEND Project and manage the research infrastructure and experimental site. (jasedwar@NRCan.gc.ca)

Evan Esch, MSc student

I am the newest, old member of the invertebrate ecology lab. I began my MSc in the fall of 2008, but have been part of the lab since 2005. I am currently investigating life history traits of the mountain pine beetle, *Dendroctonus ponderosae* (MPB), in whitebark pines, *Pinus albicaulis*. Whitebark pine is a keystone and foundation species of sub-alpine forests of Western North America. These trees have been recently listed as endangered in Alberta and are threatened or endangered across their range. Increasing MPB activity at the tree line, among other factors, has contributed to this species decline. My research hopes to answer the question, how will MPB outbreaks spread through whitebark pine containing stands in Alberta. As part of my thesis, I am also conducting a survey of invertebrates associated with this tree, which will be the first of its kind. My research has taken me to some of the most beautiful parts of Alberta and allowed me catch some of the its most exciting insects. (eesch@ualberta.ca)

Charlene Hahn, data manager for the EMEND project

I first became interested in the EMEND project as an undergrad at the University of


Charlene Wood

John holding the largest water strider in the world: *Geris gigas*.

Alberta while I was working on my BSc in Conservation Biology and Management. After landing a field assistant job and working at EMEND for a summer, I finished my BSc and accepted a position as EMEND data manager (2002) under Dr. John Spence. My primary duties as EMEND data manager are to validate EMEND core data and to assist the EMEND field coordinator with camp management and supervisory duties. (chahn@nrcan.gc.ca)

Esther Kamunya, PhD Student

My research interests have greatly been inspired by the desire to better understand the ecology of managed, especially agricultural and forest ecosystems, and how best to achieve the two-fold goal of maintaining socio-economic stability as well as ecological integrity of these systems. Specifically, I am concerned with how ecological principles of naturally maintained ecosystems can inform human management practices thus mitigating the negative impacts associated with anthropogenic disturbances. I graduated with a BEd (Science) degree from Kenyatta University (Kenya) in 1997, and taught high school biology and Chemistry before enrolling for a MSc (Animal Ecology). My research focused on the diversity of epigaeic arthropods in a diversified maize-based agroforestry system testing an Integrated Pest Management model. Currently, as part of the EMEND project, my research is focused on testing Green Tree Retention as a presumably better alternative to traditional clear-cut harvesting in the conservation of boreal moths. I live in Edmonton with my husband Simon and our 14 year old Sam and 10 year old Susan. (ekamunya@ualberta.ca)

Seung-Il Lee, PhD student

I completed my MSc at the beetle diversity lab of the Chungnam National University, Korea with an emphasis of taxonomy of Oxytelinae (Coleoptera: Staphylinidae). My current interest is saproxylic beetles (i.e. beetles that depend on dead or dying wood during some part of their lifecycle) and their response to anthropogenic disturbance. Specifically, I am looking for a threshold for forest retention patch size to minimize landscape impacts on saproxylic beetles in boreal white spruce stands. To understand this pattern in a large scale, I started my first field work in a small area which has two small sizes of clumped retention patches (0.20 and 0.46 ha) within different harvest intensity at the EMEND landscape. I have learned a lot of field techniques for my research including chainsaw technique, ATV driving, girdling, various trap installations, and also how to defend against a bear attack! I am definitely enjoying my life with saproxylic beetles as well as birding and wildlife photography in Canada's spectacular landscape. (seungil.lee@ualberta.ca)

Jaime Pinzon, PhD student

Although an entomologist in my heart, I proudly recognize myself as an arachnologist – my passion rests on spiders. I'm from Colombia, a beautiful country located in one of the most strategic points of America: the doorway between Central and South America and a great place to study spiders (is there any bad place for this?). I graduated from my BSc in 2001 from the Universidad Nacional de Colombia, after studying the biology of an orb-weaving spider and its potential use in an integrated pest management program. Until 2005, when I arrived into the Spence Lab, I

worked as a coordinator and researcher of a field station in a remote area of the Colombian Amazon, doing, among other things, inventories of spiders and butterflies. After arriving to Canada and surviving my first '30 below' experience, I was happily involved in the EMEND experiment where all my field work took place. My thesis project is focused on the community ecology of litter, understory and canopy spider assemblages in the mixedwood boreal forest of northwestern Alberta. A significant component of my research is to better understand the effects of natural disturbances (fire) and human disturbances (harvesting) on spider biodiversity and ultimately provide the forestry industry in Alberta with tools and recommendations for a more sound and sustainable forest management. (jpinzon@ualberta.ca)

Charlene Wood, MSc student

Under the joint supervision of John Spence and David Langor, I've been able to explore my passion for arthropod biodiversity and forest ecosystems. Our Canadian forests are home to an abundant and diverse pool of beetles, many of which are 'saproxylic' (i.e. dependent upon deadwood or wood-inhabiting fungi) and poorly understood. I study the community composition and specific habitats of deadwood-dependent beetles in standing and fallen dead aspen trees. These aspen trees are truly alive after death! Besides being home to cavity-nesting birds and small mammals, deadwood is teeming with invertebrates (e.g., mites, springtails, thrips, pseudoscorpions, spiders, flies, wasps, moths, lacewings, beetles), covered in cryptogams (e.g., lichens, mosses, liverworts, fungi) and imbedded with understory plants. My goals are to improve our understanding of saproxylic beetle species and the habitats they require in order to conserve these crucial components of forest biodiversity. (cwood1@ualberta.ca)

Top row, left to right: Charlene Hahn, Suzanne Abele, Jason Edwards, Seung-Il Lee, Charlene Wood. **Bottom row, left to right:** Colin Bergeron, Evan Esch, John Spence, Jaime Pinzon, Stéphane Bourassa. Esther Kamunya is missing on this picture.

Dear Buggy / Cher Bibitte

By Chris MacQuarrie

Hello! I'm sure the two of you that read my column (or all three of you if you count Mrs. Buggy) noticed it was absent from the last issue. I wish I could say I was off on a collecting trip to some exotic locale or that I was waylaid at some remote field camp with no computer access, but sadly that's not the case. Let's just say a future column will be about deadlines – why they're important and how not to cheese off your editor.

But I digress… Let's get on to this issue's question, inspired, I think, by the excellent quality of the talks seen at the recent meeting in Winnipeg.

Dear Buggy,

Please help! What can I do to improve the quality of my presentations? I always think I've put together a good talk, but inevitably I go way over my time or my audience looks bored (or worse, confused) and I don't get any questions. I've been told I do interesting work and have great results, plus I love getting up in front of an audience. So, why do my talks always bomb? What's wrong? Don't they like me?

President's Prize Seeker in Peterborough

G'day Seeker,

Let me open by saying I feel your pain. Buggy himself has struggled with how to give a good talk. Presenting is a lot like playing a musical instrument. Some people are naturals, able to get up and deliver a speech off the top of their head with a minimum of preparation just like some people can sit down at the piano and pick out a song by ear. We call those people 'freaks'. For the other 99.9% of us, the only substitute for inspiration is perspiration; in other words – practice, practice, practice.

So how do we go about getting better at our talks? Well, let's break down a typical presentation into sections and build it back up from there. First things first. Let's choose the tune. Ask yourself – What's the story I want to tell in my talk? Ideally, you want to take your audience somewhere. So, like a song, you need a beginning, a middle, and an end. Ask yourself – What are the interesting bits of my work, what's the context, why is my work important, and what

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Chris MacQuarrie is a Postdoctoral Fellow with the Canadian Forest Service in Edmonton, Alberta, where he studies the ecology and population dynamics of invasive species. Contact Chris with your questions or suggestions for future columns of 'Dear Buggy' (e-mail: cjkmacquarrie@gmail.com). You can view and comment on past columns of Dear Buggy at http://mrbugman.wordpress.com).

does it tell us about the world? Then use those bits to put together a compelling story that takes your audience where you want to go. Here you get to be creative. You can slowly rise to a crescendo, or you can craft the tune by bringing each part in separately and finishing with a flourish. Or maybe you want to give each part of your talk a 'solo' and let each section really shine on its own. Whatever works. As long as the tune stays cohesive and everyone gets to the end at the same time, you'll wind up with an interesting story. On the mechanical side, how you build that story is up to you. Some musicians just like to improvise on the tune as they play and you can build your talk in the same way with just a backbone to guide you during the actual presentation. My preference though? I work from the sheet music. I find writing a script helps me put together what I want to say at each point in the talk, and it also gives me something to refer to when I'm practicing. To each their own, just make sure that it all makes sense at the end (unless of course you're into free-form jazz).

Next, find out about where you're going to be playing. This is easy stuff, but it's important. You'll need to know how long you can play for (i.e. how long can your presentation be). This will tell you how long you have to tell your story, but more importantly it will let you know who you'll be playing for. That's because the best talks are tailored to the audience. If I'm speaking about mountain pine beetle to a group of entomologists in western Canada I can assume that most of my audience will be somewhat familiar with my topic and I can breeze over a lot of the preliminaries. But if I was presenting to a group of ecologists in Europe I might have to spend more time introducing the system I'm working on. Similarly, if I was speaking to foresters, I might emphasize the applied aspects of my research. But if I was presenting my research at a university I might focus on the evolutionary consequences. Targeting your presentation is important because you want your audience to get the most out of your talk. When you present at a conference (or anywhere, really) you're asking the attendees to give up some of their time to hear what you have to say. So don't you owe it to them to say something they might be interested in?

The third component of your presentation is your instrument. In most cases the instrument will be dictated by the organizers of the conference. So you likely will use PowerPoint, but you may use a .pdf file instead, or perhaps photographic slides or overheads if you're travelling somewhere that may not have a projector (if you don't know what photographic slides or overheads are, ask someone over 30). Here it's important to make sure your instrument is both appropriate for the task and in tune. It's likely that in almost all your presentations you'll be using PowerPoint, or some other computer-based media. Fortunately, there are plenty of sites out there that list the dos and don'ts of presentation – read those and heed their advice. I'll link to some good ones on my website. But why use PowerPoint all the time? If the opportunity presents itself, why not give a chalk-talk? (and again, if you don't know what chalk is ask someone over 30). You may choose to illustrate your presentation using only the white-board and some markers, or maybe you only have slides for the most important parts of your talk. Consider how compelling a talk could be when it is not accompanied by the usual aids. On the other hand, it might look like someone giving a Theremin concert – interesting, but just a little too weird. Regardless of your media, make sure your visual aids are compelling, clear and concise (in tune). Spend a good deal of your time here because your visual aids help you tell your story. Remember, there's a reason you see all those guitars on stage at a rock show. The best song in the world can sound like garbage if the band ain't in tune.

Ok, so far we've picked the instrument, written the music and figured out how we're going to play. I've also just about bludgeoned this metaphor to death, so let's finish quickly and exit stage-left. So what have we forgotten? For the answer to this question we return back to the start of this column. The difference between a successful presentation and an unsuccessful one

can often be ascribed to the amount of prep time the speaker put into the talk. Experienced presenters are like experienced musicians; they can put together a talk in the hotel room the night before, run through it once or twice and do a bang up job in the 8am session. That's because they've presented many, many times before and getting up in front of the screen is almost as much muscle-memory as it is anything else. You, on the other hand, likely don't have that much experience at presenting. So I'll offer the same advice that's given to most rookies. Finish your talk early, practice it multiple times alone and out loud so you get used to the sound of your own voice. Practice your pacing and your timing and don't be afraid to edit your talk until it is letter perfect, clear and concise. I also try to practice in front of an audience and then ask for their honest feedback. Also, while you're presenting to your practice audience, watch them and pay attention to their body language. If they start tuning-out that might be a suggestion of where you need to punch up your talk.

So Seeker, I hope that advice helps. I suspect you're actually a better presenter than you think you are. Stage fright and our own native insecurities often lead us to think we did a worse job then we actually did. Becoming a good presenter is a learning process. Over time and with practice you'll figure out your favourite way of putting together a talk and your own style of presentation. If you work at it eventually you'll find presenting gets easier. If you're lucky, maybe one day you'll be one of those enviable few that not only have compelling research but a skill at presentation that draws people into their talks.

Buggy

Dan Riley

Gonyleptes horridus (Opiliones: Gonyleptidae) – photographed at the Reserva Ecológica de Guapiaçu, which protects one of the last stands of the severely depleted Atlantic Rainforest in Brazil.

19th International Plant Resistance to Insects Workshop
Charleston, South Carolina, USA, 28-31 March 2010
http://entweb.clemson.edu/scesweb/ipri/

Joint IOBC – Nearctic and Neotropic Regional Sections Conference
Niagra Falls, Ontario, 11-13 May 2010
http://www.iobcnrs.com/event_5-11-10.htm

6th International Wolbachia Conference
Asilomar California, USA, 9-14 June 2010
http://www.wolbachia.sols.uq.edu.au/news.cfm?action=newsitem&id=204

54th Livestock Insect Workers Conference
Knoxville, Tennessee, USA, 27-30 June 2010

6th International Conference on the Biology of Butterflies
University of Alberta, Edmonton, Alberta, 29 June-2 July 2010
http://www.biology.ualberta.ca/biobutterfly2010

43rd Annual Meeting of the Society for Invertebrate Pathology
Trabzon, Turkey, 11-15 July 2010
www.sip2010.org

7e conférence internationale francophone d'entomologie
Louvain-la-Neuve, Belgique, 5-10 July 2010
http://www.biodiv.be/events/7eme-conference-internationale-francophone

XIIIth International Congress of Acarology
Recife, Brazil, 23-27 August 2010
http://www.cenargen.embrapa.br/ica13/index.php

Joint Annual Meeting of the Entomological Societies of Canada and British Columbia
Vancouver, British Columbia, 31 October-4 November 2010
http://www.sfu.ca/biology/esbc/JAM/jam_announce.html

58th Annual Meeting of the Entomological Society of America
San Diego, California, 12-15 December 2010
http://www.entsoc.org/am/fm/index.htm

Joint Annual Meeting of the Entomological Societies of Manitoba and Canada

The Joint Annual Meeting of the Entomological Societies of Manitoba and Canada took place from October 18 to 21, 2009 at the Fort Garry Hotel in Winnipeg, Manitoba and was another fantastic conference! The weather was surprisingly nice, the hotel was beautiful, there were lots of good restaurants nearby, and there was plenty of opportunity for fun and socializing throughout the meeting. A curation blitz took place at the J.B. Wallis Museum and the plenary talks, involving climate change, were very interesting. The Graduate Student Symposium was a great success. All the speakers gave excellent talks and received a $100 honorarium at the Awards Banquet, in addition to having their registration costs for the meeting covered by the ESC this year. Thanks to everyone who participated in the symposium and I encourage all those students who are finishing up their theses to apply for this symposium next year. The extra time allotted to the presenters in this symposium allows students to present their thesis as a whole, not just bits and parts of one's research, which makes for an enjoyable symposium for both the audience and the presenters. The abstracts from this year's Graduate Student Symposium are included in this issue of the *Bulletin* at the end of the Student Wing section. Next year, the Entomological Societies of Canada and British Columbia will host the joint annual meeting in the lovely Vancouver, BC at the end of October and beginning of November. So, start thinking about your Halloween costume early as there might be plans for a Student Mixer/Costume Contest to take place at the meeting in 2010… ☺

The Student Mixer was an all-night event and it included the very entertaining Insect Trivia Contest. Almost all of the students at the Mixer participated in the contest which turned out to be a lot of fun for everyone. The winners of the prestigious title "Biggest Bug Nerds 2009" were Team Ramrod: Laura Timms, Paul Abram, Kristin Hynes, and Alicia Leroux. They also received two puppets, an ant and a wasp, as well as two t-shirts, with insects of some sort on them, for prizes (kindly donated by my supervisor Dr. Fiona Hunter).

We received about 18 boxes of books for donation to the Silent Auction this year. And, with the help of many students (especially Lars Andreassen, Akriti Sharma, Alicia Leroux, and Roberto Duarte Fernandez from the University of Manitoba), we were able to organize them and the Silent Auction and raised over $1600 for ESC Student Scholarships and Awards! On behalf of the ESC students, I would like to thank everyone who donated books (Monty and Grace Wood, Bob Lamb and Pat Mackay, JoAnne Buth, Roy Ellis, Neil Holliday, David Rosenberg, Mary Galloway, Rob Roughley, NRC Press, and the ESC). I would also like to thank Lars Andreassen, Tyler Wist, Daniel Antwi-Amoabeng, Christa Rigney, for their assistance with the Silent Auction tables during the course of the meeting. Many thanks also go to Neil Holliday, Bob Lamb, Pat Mackay, Lars Andreassen, Akriti Sharma, Alicia Leroux, and Roberto Duarte Fernandez, and Brent Elliot for their help with organizing the Silent Auction before the meeting began. I was truly impressed by willingness of so many to help, which made everything run smoothly, and allowed me to really enjoy the conference even though I was so busy.

La réunion conjointe annuelle des Sociétés d'entomologie du Manitoba et du Canada

La réunion conjointe annuelle des Sociétés d'entomologie du Manitoba et du Canada a eu lieu du 18 au 21 octobre 2009, à l'hôtel Fort Garry à Winnipeg, au Manitoba et a été une autre conférence fantastique ! Le temps a été étonnement agréable, l'hôtel était magnifique, il y avait beaucoup de bons restaurants à proximité et beaucoup d'opportunités de plaisir et d'activités sociales tout au long de la réunion. Un blitz d'identification a pris place au Museum J.B. Wallis et la session plénière, concernant les changements climatiques, était très intéressante. Le symposium des étudiants gradués a été un grand succès. Tous les conférenciers ont donné d'excellentes présentations et ont reçu un montant honoraire de 100$ au banquet, en plus de leurs frais d'inscription couverts par la SEC cette année. Merci à tous ceux qui ont participé au symposium et j'encourage tous les étudiants qui terminent leur doctorat d'appliquer pour ce symposium l'an prochain. Le temps supplémentaire alloué pour les conférenciers de ce symposium permet aux étudiant de présenter leur thèse comme un tout, plutôt qu'en partie, ce qui en fait un symposium agréable autant pour l'audience que pour les conférenciers. Les résumés du symposium d'étudiants gradués de cette année sont inclus dans ce numéro du *Bulletin* à la fin de la section Aile étudiante. L'an prochain, les Sociétés d'entomologie du Canada et de la Colombie-Britannique organiseront la réunion conjointe annuelle à Vancouver, C.-B., à la fin octobre et au début de novembre. Alors commencez à penser à votre costume d'Halloween puisqu'il y aura sûrement des plans pour un cocktail étudiant/concours de costumes à la réunion de 2010… ☺

Le cocktail étudiant a occupé une soirée entière et comprenait le très divertissant quiz entomologique. Presque tous les étudiants du cocktail ont participé au quiz qui s'est avéré être très amusant pour tout le monde. L'équipe gagnante du prestigieux prix du « Plus grand nerd des bibittes 2009 » est l'équipe Ramrod: Laura Timma, Paul Abram, Kristin Hynes et Alicia Leroux. Ils ont reçu deux marionnettes, une fourmi et une guêpe, ainsi que deux chandails avec des insectes de toute sorte (gracieusement offerts par ma directrice, Dr. Fiona Hunter).

Nous avons reçu approximativement 18 boîtes de livres en don pour les enchères silencieuses cette année. Et avec l'aide de nombreux étudiants (particulièrement Lars Andreassen, Akriti Sharma, Alicia Leroux et Roberto Duarte Fernandez de l'Université du Manitoba), nous avons été en mesure de les organiser et les enchères silencieuses ont amassé plus de 1600$ pour les prix et bourses de la SEC! Au nom de tous les étudiants de la SEC, je voudrais remercier tous ceux qui ont donné des livres (Monty et Grace Wood, Bob Lamb et Pat Mackay, JoAnne Buth, Roy Ellis, Neil Holliday, David Rosenberg, Mary Galloway, Rob Roughley, les presses scientifiques du CNRC et la SEC). Je voudrais aussi remercier Lars Andreassen, Tyler Wist, Daniel Antwi-Amoabeng, Christa Rigney pour leur aide avec les tables des enchères silencieuses durant la réunion. Merci beaucoup à Neil Holliday, Bob Lamb, Pat Mackay, Lars Andreassen, Akriti Sharma, Alicia Leroux, Roberto Duarte Fernandez et Brent Elliot pour leur aide avec l'organisation des enchères silencieuses avant le début de la réunion. J'ai vraiment été impressionnée par la volonté de tant de gens à aider, ce qui a permis un déroulement en douceur et m'a permis de vraiment apprécier la réunion même si j'étais tant occupée.

Nous avons également été en mesure d'amasser 834$ additionnels pour les prix et bourses de la SEC par le biais du tirage du « Encyclopedia of Entomology ». Kenna MacKenzie, présidente du comité des publications de la SEC a généreusement donné une copie de la seconde édition de cette encyclopédie (valeur de 709$ US) qui a été tiré au sort durant la réunion. Les étudiants (Aynsley Thielman, Lars Andreassen, Christa Rigney, Daniel Antwi-Amoabeng et

We were also able to raise an additional $834 for ESC Student Scholarships and Awards through the Encyclopedia of Entomology Raffle. Kenna MacKenzie, Chair of the ESC Publications Committee, kindly donated a copy of the second edition of the Encyclopedia of Entomology (valued at $709 US), which was raffled off during the course of the meeting. Students (Aynsley Thielman, Lars Andreassen, Christa Rigney, Daniel Antwi-Amoabeng, and Tyler Wist) sold tickets to conference attendees during the General Mixer, the Poster Session, some of the Refreshment Breaks, and during the Banquet before the winning ticket was drawn. Sincere thanks go out to all the students who helped sell tickets, to all those who supported ESC Student Scholarships and Awards by purchasing tickets, and to everyone involved with the raffle: Pat Mackay and Bob Lamb (for their help with the Manitoba Gaming License), Kenna MacKenzie (for donating the books and selling tickets), and Jessica Vickruck (for designing the tickets).

I would also like to thank Brent Elliot of the ESC/ESM 2009 Organizing Committee for all of his assistance with the student-related events during the meeting. Whenever I needed something, he magically appeared and was always able to help with whatever I needed, and for that I am very grateful.

Sincerely,
Aynsley

NEW! Changes to the Thesis Roundup

In the past, the Thesis Roundup section of the *ESC Bulletin* has been compiled by the members of the Student Affairs Committee. To do this, SAC members have contacted the professors and/or department heads of each university in Canada that offers entomological education to solicit the names, thesis titles, etc. of students that have successfully defended their theses. Unfortunately, not everyone has the time or knowledge to provide this information, resulting in some students being included in the Roundup but others being left out. It has also recently come to our attention that including e-mail addresses for students, without their prior consent, may be a violation of privacy protection legislature. Getting this consent is often difficult because students, having recently completed their degrees, have often moved on from the lab they worked in and may not have left forwarding information.

Therefore, in an attempt to solve both problems, the Student Affairs Committee has changed the way in which the Thesis Roundup is to be compiled in the future. Students wishing to see their information published in the Thesis Roundup section of the *ESC Bulletin* should now send us their information directly. A Thesis Roundup Submission Form will now be included in the *Bulletin* (can be filled in and snail mailed to me) and on the ESC website in the Student Affairs section (can be filled in and e-mailed to me). If you have any suggestions or comments regarding the Thesis Roundup section, please don't hesitate to let me know.

Aynsley Thielman
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St. Catharines, ON L2S 3A1
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Tyler Wist) ont vendu des billets aux participants de la réunion durant le cocktail général, la session d'affiches et certaines pause-café et durant le banquet avant le tirage du billet gagnant. Merci beaucoup à tous les étudiants ayant aidé à vendre les billets, à ceux qui ont supporté les prix et bourses étudiants de la SEC en achetant des billets et à tous ceux qui se sont impliqués dans le tirage: Pat Mackay et Bob Lamb (pour leur aide avec les permis de jeux du Manitoba), Kenna MacKenzie (pour le don des livres et la vente de billets) et Jessica Vickruck (pour la conception des billets).

Je voudrais également remercier Brent Elliot du comité organisateur 2009 pour son aide avec les évènements étudiants durant la réunion. À chaque fois que j'avais besoin de quelque chose, il apparaissait par magie et était toujours capable d'aider peu importe ce dont j'avais besoin, et je lui en suis très reconnaissante.

Sincèrement,
Aynsley

NOUVEAU! Changement au foisonnement de thèses

Par le passé, la section du foisonnement de thèses du *Bulletin de la SEC* était compilée par les membres du Comité des affaires étudiantes. Pour se faire, les membres du comité contactaient les professeurs et/ou les directeurs de département de chaque université au Canada afin de solliciter les noms, titres de thèses, etc. des étudiants ayant défendu leur thèse avec succès. Malheureusement, tout le monde n'a pas le temps ou les connaissances pour fournir cette information, le résultat étant que certains étudiants étaient inclus dans le foisonnement de thèses alors que d'autres en étaient exclus. De plus, il est récemment venu à notre attention que le fait d'inclure l'adresse courriel des étudiants sans leur consentement pouvait constituer une violation de la Loi sur l'accès à l'information et la protection de la vie privée. Obtenir le consentement est parfois difficile puisque les étudiants ayant récemment terminé leurs études déménagent souvent de leur labo et ne laissent pas toujours leurs informations de contact.

Ainsi, afin de tenter de résoudre les deux problèmes, le comité des affaires étudiantes a changé la façon de compiler le foisonnement de thèses. Les étudiants qui souhaitent voir leurs informations publiées dans le foisonnement de thèses du *Bulletin de la SEC* doivent maintenant nous envoyer leurs informations directement. Des formulaires de soumission au foisonnement de thèses seront maintenant inclus dans le *Bulletin* (à remplir et m'envoyer par courrier) et à la section des affaires étudiantes du site Internet de la SEC (à remplir et m'envoyer par courriel). Si vous avez des suggestions ou des commentaires concernant la section du foisonnement de thèses, n'hésitez pas à me les faire parvenir.

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Graduate Student Symposium 2009

Joint Annual Meeting, 19 October 2009, Winnipeg, Manitoba

Chair: Aynsley Thielman

Speakers and Abstracts (in order of presentation)

Phylogeny of the tribe Elachipterini (Diptera: Chloropidae)

Julia J. Mlynarek and Terry A. Wheeler
Natural Resource Sciences, McGill University, Quebec, Canada

The acalyptrate family Chloropidae is a diverse and abundant group of true flies with many morphologically bizarre representatives. The family is divided into three subfamilies: Siphonellopsinae, Chloropinae and Oscinellinae. Two attempts have been made to classify the 3000 described species of the Chloropidae but neither is strongly supported phylogenetically. The Oscinellinae is currently divided into 12 tribes, one of which is the Elachipterini. This tribe has an almost worldwide distribution, although some genera are very limited in their range. There is also a wide range in the number of species per genus. Because of the scarcity of previous phylogenetic analyses, and the age of most museum specimens, morphological characters are an appropriate data set for resolving relationships. I conducted a phylogenetic analysis of the tribe Elachipterini using an exemplar approach and morphological characters of adult specimens. Currently, Elachipterini is comprised of ten genera with over 160 described species. Based on the analyses, the monophyly of Elachipterini is supported by multiple characters. However, resolution within the tribe is less clear because of widespread homoplasy. *Elachiptera* and *Disciphus* are apparently paraphyletic because of the current recognition of some small autapomorphic genera (*Ceratobarys, Cyrtomomyia, Goniaspis*) and some undescribed species with intermediate combinations of character states. In addition, all species of the large genus *Melanochaeta* that have been analysed to date appear to be monophyletic. As a result of this analysis several changes in generic limits will be required to make the classification of the Elachipterini reflect the evolutionary history of the included species.

The role of *Anopheles gambiae* mosquitoes feeding decisions on vector-borne disease transmission

Brian O. Ma and Bernard D. Roitberg
Simon Fraser University, Burnaby, British Columbia, Canada

Female anautogenous *Anopheles gambiae* s.s. (Diptera: Culicidae) mosquitoes require host blood for egg production; however, these mosquitoes also use sugar, although to what extent is poorly understood. Although blood is necessary for egg production, it is inherently risky and furthermore, a poor resource for fueling flight and somatic maintenance because of its low conversion efficiency to energy reserves. Sugar, on the other hand, can be readily used to fuel somatic maintenance and flight. Thus, there is a trade-off between reproduction and survival when using these two resources. In light of complex tradeoffs between these two disparate resources, we use a combination of theory and experiments to explore the effects of a female mosquito's feeding behaviour on a mosquito's life history and the implications of these feeding decisions on disease transmission. We develop a dynamic state variable model that explores the best

activity decisions for a female mosquito over her lifetime. This model explicitly considers the numerous tradeoffs between sugar and blood feeding behaviour. To validate our model, we use a wind tunnel to determine the role of energetic condition on blood host seeking and acceptance in the absence of choice. We then use a two-port olfactometer to test whether a female mosquito with different energetic condition, given a choice, will choose a sugar host over a blood host. We expand our results to consider the implications of sugar and blood on the ability for these mosquitoes to spread disease using a Ross-Macdonald modeling framework.

Biodiversity of the Muscidae (Diptera) of Churchill (MB) in a context of environmental changes

Anaïs Renaud[1], Dr. Jade Savage[2] and Dr. Rob Roughley[1]
[1]University of Manitoba, Winnipeg, Manitoba, Canada
[2]Bishop's University, Sherbrooke, Québec, Canada

A number of studies have shown that some organisms are affected by recent environmental changes occurring in the Arctic. However, the responses of insects to these changes have not been well studied in the Nearctic Region. In Churchill (MB), the ever-increasing human-related activities combined to the effects of climate warming have disturbed arctic habitats and potentially affected the biodiversity of local insects. Therefore, the study of historical changes in the distribution and abundance of some important northern taxa, such as the fly family Muscidae, may allow us to better understand the impacts of recent environmental changes on the biodiversity of northern insects. The composition of arctic muscids has been last reviewed by Huckett in 1965. The pre-1965 Churchill diversity, based on Huckett (1965) and supplemented with North American collection material, was compared to the post-1965 Churchill diversity, obtained from collection specimens and an extensive sampling season in 2007. Preliminary results indicate that the species composition of Muscidae in Churchill has changed. Two new generic and 33 new species records have been confirmed for the area, but one genus and ten previously abundant species were not collected in 2007. Nearly half of the new distribution records for Churchill represent a northern range expansion or shift, suggesting that recent warming trends may in part be responsible for the change in distribution and species composition of muscid flies observed in Churchill.

Antagonistic selection on an antipredator defence: one predator type and the combined effects of prey phenotype and environment

Bianca Wohlfahrt and Dr. Steven M. Vamosi
University of Calgary, Calgary, Alberta, Canada

Adaptations to heterogeneous environments may lead to phenotypic differentiation in closely related prey species. Predation is a strong selective factor that is known to facilitate phenotypic differentiation. In correspondence, prey species may posses a variety of different antipredator defences. However, the effectiveness of antipredator defences is not universal, and ineffective antipredator defences can lead to decreased survival. In this study, we examined the effectiveness of two morphological antipredator defences (body size and elytral maculation pattern) in four species of dytiscid diving beetles (Coleoptera, Dytiscidae) under heterogeneous environmental conditions (plant density and water colour). Dytiscid beetles represent a species rich and phenotypically diverse component of aquatic communities. Previous results have shown that the

community composition of dytiscid beetles may be significantly influenced by environmental factors, such as predator presence, vegetation structure and water clarity. In correspondence with that, our results revealed that prey mortality risk generally decreased with larger body size, whereas the effectiveness of elytral maculation patterns depended on water colour and prey phenotype. In clear water, small maculated dytiscids had survival rates equal to larger plain beetles. However, under dark water conditions, the effectiveness of elytral maculation in larger beetles decreased to the point that it became detrimental to survival, revealing an adaptive trade-off. Our results suggest that interactions among biotic and abiotic factors in heterogeneous environments dominated by the same predator-type can lead to antagonistic selection on prey species' antipredator defences.

Host range of a male-killing bacterium infecting filth fly parasitoids

Graeme Taylor, Kevin Floate, and Steve Perlman
University of Victoria, Victoria, British Columbia, Canada

The Son-killer bacterium (*Arsenophonus nasoniae*) infects the blow fly parasitoid *Nasonia vitripennis* (Hymenoptera: Pteromalidae), causing virtually all male offspring to die as eggs. Interestingly, this bacterial symbiont can be surprisingly transmitted both vertically (from mother to offspring) and horizontally (to unrelated *Nasonia* parasitizing the same host). This capability for horizontal transmission suggests that this symbiont may have the potential to move through a biological community and utilize diverse host species. Here I used two complementary methods to examine whether Son-killer has a wider host range than was previously anticipated. First, I used *Arsenophonus*-specific primers to screen a large sample of filth flies and their associated parasitoids for infection. I found that a wide range of pteromalid wasps are infected with *Arsenophonus* spp., indicating a transfer could have occurred when these species interact with *N. vitripennis*. Second, I inoculated four species of pteromalid wasps with a strain of *A. nasoniae* that I collected and isolated from field-caught *N. vitripennis*, and measured maternal transmission efficiency and male-killing activity. This bacterium was successfully transmitted to all four species, although maternal transmission efficiency was low, and this strain did not exhibit detectable male-killing in any of the species used. I have also found that Son-killer harbours a lysogenic bacteriophage that is widespread in *Arsenophonus* spp. infecting the filth fly community. The Son-killer bacterium and its phage may play an important role in shaping its ecological community, and understanding their effects is crucial for establishing successful biocontrol programs for fly populations.

What happens after establishment? Using gypsy moth to explore indirect impacts of invasive species on native communities

Laura Timms and Sandy M. Smith
University of Toronto, Toronto, Ontario, Canada

Invasive species are one of the most serious threats affecting natural environments today; however, surprisingly little research has addressed the impacts of invasive species establishment on native food webs. My research addresses the questions: what are the ecological impacts of an exotic species upon its establishment in a new community? Does the community shift after the invasive establishes, and if so, what are the main drivers in this realignment? With a wide host range and a large assemblage of natural enemies, the gypsy moth (GM) has broad potential to

affect North American forest insects. I assessed the structure and diversity of native caterpillar-parasitoid communities in forests with and without histories of GM outbreak. Despite predictions to the contrary, GM history was not a strong predictor of caterpillar community structure or parasitism. GM abundance, however, had a negative relationship with species richness and a significant effect on the structure of late-season caterpillar assemblages. These results suggest that GM may affect native caterpillar communities through short-term indirect mechanisms but not through long-term ecological changes. In addition to community-level impacts I found correlations between abundances of GM and several native defoliating species, including a strong positive association between GM and the forest tent caterpillar (FTC). Previous work has suggested that changes in host plant chemistry can alter GM susceptibility to its virus. I investigated the hypothesis that feeding by FTC can induce changes in host plant chemistry that indirectly affect GM growth and mortality, using manipulative greenhouse experiments. Preliminary results indicate that FTC feeding on trembling aspen can cause greater levels of virus-induced mortality in GM.

Rick West

Graduate symposium speakers. **Top row (left-right):** Julia Mlynarek, Brian Ma, Anaïs Renaud. **Bottom row:** Bianca Wohlfahrt, Graeme Taylor, Laura Timms.

ESC 2009 student award winners / Gagnants des prix étudiants SEC 2009

ESC Scholarships and Awards presented at the 2009 annual meeting

This year's **Kevan Scholarship** went to **Chris Borkent** of McGill University. Chris is working on the systematics of the Diptera family Mycetophilidae (s.s.). Two main objectives of his research are: (1) to undertake a world revision of the genus *Leptomorphus*, and (2) to test the monophyly of the tribe Sciophilini. He says the following of his research plans: "The genus *Leptomorphus* currently contains 31 species placed in four subgenera. I expect to describe a number of new species as the only previous regional revision described nine new species where only one was known previously. I have already discovered three new Nearctic species and expect to find more in other regions. Along with my revision of the genus, I will produce a phylogenetic hypothesis of species relationships in *Leptomorphus* using morphological data from larvae, pupae, and adults."

Rick West

Haley Catton with Maya Evenden

The 2009 **Borden Scholarship** went to **Haley Catton** of UBC Okanagan. Haley is studying the invasive weed hounds tongue and its biological control agent *Mogulones cruciger* to directly address questions about nontarget attack: (1) Does nontarget attack affect plants at the population level in the field? (2) What factors (i.e. dispersal distance, starvation, prior experience, host/nontarget plant abundance/distribution/condition) induce *Mogulones cruciger* to attack nontarget plant populations? (3) What level of nontarget attack is acceptable for sustaining populations? It has been found that *M. cruciger* will attack some nontarget plants and thus it is important to evaluate its potential impact.

Rick West

Chris Borkent with Peter Kevan

Two **graduate research travel scholarships** were awarded this year. **Joel Gibson** of the Canadian National Collection of Insects and the Biology Department, Carleton University received the PhD travel award to go to California to collect Conopidae particularly in the two genera, *Robertsonomyia* and *Physoconops* (*Gyroconops*), and to attend the biennial field meeting of the North American Dipterists Society in Crescent City, California in June/July 2009.

Joel's present research focuses on the family Conopidae (Diptera). He is investigating the phylogenetic relationships of the genera within the group as well as the placement of the family within the Diptera. A particular emphasis of this research is on the genus *Stylogaster*. Mor-


Rick West

Joel Gibson

phological characters as well as mitochondrial and nuclear gene sequences will be used in this analysis. The classification and systematics of this group is important because the conopids are parasitoids that mimic Hymenoptera and are also pollinators.

The second award went to **Joelle Lemmen** of the University of Alberta. Joelle attended a course on insect chemical ecology in Alnarp Sweden in June 2009.

Joelle is examining the mechanisms of pheromone response plasticity in males of the long-lived ash leaf cone roller moth, *Caloptilia fraxinella* (Lepidoptera: Gracillariidae). She is looking at how both endogenous factors such as juvenile hormone and biogenic amines, and exogenous factors including temperature and photoperiod influence male physiology and impact male pheromone response at different times during its long adult life.


Rick West

Joelle Lemmen


Rick West

Pam Craig

The **postgraduate scholarship** for a student at the **MSc level** went to **Pam Craig** of the Nova Scotia Agricultural College. Pam is studying bee pollinators in Nova Scotia. The primary objective of her work is to determine factors which may influence native bee biodiversity in wild blueberry production. The specific objectives are to: (1) Identify and assess the diversity of native bee species currently present in wild blueberry fields in the Maritime Provinces, (2) Determine the relationship between native bee diversity and plant diversity within wild blueberry fields, (3) Determine the relationship between native bee diversity and macro-scale landscape structure surrounding wild blueberry fields, (4) Determine the influence of habitat fragmentation on bee diversity in wild blueberry fields, and (5) Determine the influence of bee diversity on pollination success and yield in wild blueberry.

Jay Fitzsimmons of the University of Ottawa received the **postgraduate scholarship** for a student at the **PhD level**. Jay's PhD research is focused on the effects of modern climate change on insect species' ranges and morphology. He is conducting research on a variety of insect taxa across a range of temporal and spatial scales, from mutation-level changes in the laboratory to species range shifts across North America. Areas of his research include latitudinal range shifts of butterfly species, uphill range shifts of filth inhabiting flies from collection made in the 1900s, and body size shifts associated with environmental temperature changes.

Rick West

Jay Fitzsimmons

Three **Ed Becker Conference Travel awards** were made this year of $500 each. Winners are **Andrea Stephens**, University of British Columbia who is studying interactions between biological control agents on diffuse knapweed, **Julien Pompon**, Potato Research Centre, Agriculture and Agri-Food Canada, who is studying the relationship between xylem consumption, fecundity and the obligate symbiont in *Macrosiphum euphorbiae*, and **Haley Catton** who is studying nontarget effects in biological control of houndstongue at the University of British Columbia - Okanagan.

Rick West

Haley Catton, Andrea Stephens, and Julien Pompon, with ESC President Maya Evenden

Applying for ESC Scholarships and Awards

The deadline for next year's Entomological Society of Canada of Scholarships and Awards will be 16 February 2010.

The 2010 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 Vancouver.

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

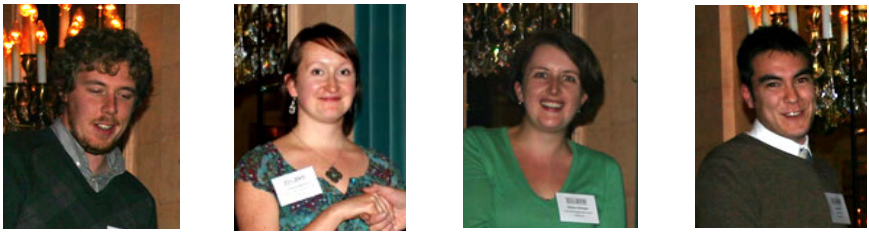
President's Prize winners of the 2009 JAM

The President's Prize for best oral presentations at the Joint Annual Meeting of the ESC and ESM (October 2009) were awarded to:

- **Adam Blake** (University of Alberta): "The influence of canola nutrition on the oviposition choice and larval development parameters of the cabbage seedpod weevil", co-authored by L. M. Dosdall and B. A. Keddie.
- **Chandra Moffat** (University of British Columbia): "Impacts of plant nutrition on host-parasitoid population dynamics", co-authored by D. R. Gillespie
- **Sandra Gillespie** (University of Massachusetts): "Factors affecting parasitism in native bumble bees", co-authored by L. S. Adler.

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

- **Boyd Mori** (University of Alberta): "Development of a pheromone-based monitoring tool for the red clover caseberaer (*Coleophora deauratella*) in Alberta", co-authored by R. Gries, J. Otanni, C. Yoder, and M. L. Evenden.



Rick West

President's Prize winners: Adam Blake, Chandra Moffat, Sandra Gillespie, and Boyd Mori.

Northern California: Collections and Collecting

North American Dipterists' Society Field Meeting 2009

By Joel Gibson

Northern California was chosen as the location for the 2009 edition of the biennial North American Dipterists' Society (NADS) Field Meeting. This announcement was especially fortuitous as it served three needs of mine in one, convenient trip. Firstly, it would be my first NADS meeting. Secondly, it would give me the chance to visit four major insect collections in Northern California. Finally, it would give me the chance to do some field collecting in an especially biodiverse region of North America.

Upon arriving in San Francisco, I was within two hours drive of four of the largest insect collections in western North America. The California Academy of Sciences entomology collection in San Francisco houses over ten million insect specimens from around the globe. Just across the bay, on the campus of the University of California-Berkeley is the Essig Museum entomology collection. This collection houses over five million specimens, including those collected as a part of the California Insect Survey, conducted annually from 1939 to 1999. The California State Collection of Arthropods is housed within the Plant Pest Diagnostics Branch of the California Department of Agriculture in Sacramento. This facility functions as the diagnostic identification service for the state and includes a collection of over one and a half million specimens including an extensive Frozen Tissue Collection suitable for molecular analysis. My final collection stop was the Bohart Museum entomology collection on the campus of the University of California-Davis. This collection houses over seven million specimens and is the current home of the California Insect Survey.

All four collections are staffed by helpful, knowledgeable, and friendly people. In each collection, I was given the opportunity to survey the collection holdings in my group of interest: the Conopidae, or thick-headed flies. These parasitoid flies tend to be collected in small numbers, so no collection ever has an extensive number of them. Each collection visit, however, always turns up a few unique gems that may have gone unnoticed for decades. After identifying and cataloguing the conopid holdings, I was able to follow up with my second reason for visiting each collection. The vast number of California-collected specimens combined with the

Figure 1: Morning mist from atop Schoolhouse Peak, Redwoods National Park, California.

Joel Gibson is a PhD student currently working on a morphological and molecular revision of Conopidae (Diptera) at Carleton University and the Canadian National Collection of Insects, Arachnids, and Nematodes. He can be contacted at joel.gibson@agr.gc.ca.

Figure 2: The author with a tree showing feeding damage from the rarely seen, and likely mythical, Giant Redwood Sawfly.

collecting expertise of the curatorial staff I met furnished me with a list of potential conopid hotspots in northern California.

Four days at the microscope in four different collections proved to be a limit for me, and I needed to get out into the field and catch some conopids myself. Dr. Monty Wood, one of my colleagues back at the Canadian National Collection of Insects, Arachnids, and Nematodes (CNC), had told me of a hilltop he had visited a number of times in the past three decades that was particularly rich in parasitoid flies. It is located in the Hopland Research and Extension centre, a part of the network of research centres administered by the University of California. Dr. Cheryl Barr, my contact at the Essig Museum, helped me to arrange a visit to the site. While primarily a rangeland and pasture research facility, the Hopland centre does contain some excellent habitat in the heart of California wine country. Dr. Wood was proven correct, yet again, when a hilltop he pointed out from a picture in a 1962 publication turned up my first conopid of the trip.

Another location suggested by CNC colleagues was the Stebbins Cold Canyon Reserve, located near Lake Berryessa and administered by the University of California-Davis. Dr. Steve Heydon, of the Bohart Museum collection, gave me directions to the hilltop found within the reserve. While late May is certainly past the prime of the season for this part of California, it was a fine hilltop with a lot of potential for dipteran collecting.

Following my time in central California, I made the six-hour journey Northwest to Crescent City for the NADS Field Meeting. Dr. Peter Kerr and Dr. Steve Gaimari, of the California State Collection of Arthropods, served as organizers of the four-day event, which ran from June 1-4, 2009. The emphasis at these meetings is split between informative talks and ample collecting time. Upon arrival in Crescent City, there was a presentation on the variety of collecting locales to be found in Northern California and Southern Oregon. With over 40 of the top dipterists in the U.S. and Canada in attendance, including many with vast experience collecting in the Pacific Northwest, there was no shortage of advice on possible collecting locales for any given fly of interest. The opening banquet included much discussion of collecting plans for the next few days.

The weather looked cloudy and rainy Tuesday morning. As we drove up the narrow roads through Redwoods National Park, we eventually broke through the clouds and were greeted with a breathtaking view of the cloud-filled valleys below (Figure 1). Schoolhouse Peak proved to be yet another fruitful hilltop for Diptera as our group combed the peak for Conopidae, Tachinidae, and Tabanidae. Following a brief stop to get an up close look at some of the Giant Redwoods (Figure 2), we returned to the hotel to assess our day's catch. A suite of talks on the flies of far-flung places was scheduled for Tuesday evening. Australia, Thailand, French Polynesia, Mongolia, and Delmarva all featured prominently. To my surprise, I discovered that Delmarva is not a newly-minted nation, it is an acronym for the U.S. states of the mid-Atlantic coast (i.e. DELaware, MARyland, VirginiA).

Wednesday we headed North to a few locales that had proved fruitful for colleagues on Tuesday. Of particular interest was Rough and Ready Creek, just over the border in Josephine County, Oregon. Despite its unusual name and location beside the local airport, this site proved to be a unique dry meadow buzzing with flies. A morning of collecting produced many specimens, including some interesting Asilidae and Bombyliidae. Back in Crescent City, the final section of talks included discussions of the wide range of techniques currently used in dipterological research. Classical morphological taxonomy, molecular phylogeny, and interactive, web-based databasing were all highlighted. Talks were followed by a final chance to discuss important finds and near-misses, future projects, and plans for the next NADS field meeting. Regardless of where it is held, I intend to be one of the first to register for the 2011 edition of this event as the 2009 edition proved to be one of the most informative, productive, and enjoyable meetings I have ever attended.

My thanks to all those who hosted me at their collections, in their homes, and in their vehicles, especially Dr. Martin Hauser, Dr. Owen Lonsdale, and Dr. Jim O'Hara. Thanks as well to the organizers of the NADS meeting. Finally, thanks to the Dipterology Fund and the Entomological Society of Canada Graduate Research Travel Scholarship for funding this trip.

Jeff Skevington

Another wasp-mimicking fly – *Physocephala tibialis* (Conopidae)

BC entomologist receives national award from Canadian museum network

Dr. Robert Cannings, a respected scientist who has devoted his career to the study of entomology (insects), is the distinguished recipient this year of the Bruce Naylor Award. This national award, presented by the Alliance of Natural History Museums of Canada (ANHMC), recognizes exceptional contributions to the study of museum-based natural history in Canada.

Dr. Cannings' contributions as a biologist go back decades, from his early days as a naturalist and nature interpreter, to his 29 years as Curator of Entomology at the Royal BC Museum (RBCM) in Victoria. He has authored several books, published more than 100 peer-reviewed scientific articles and written over 100 popular articles. Under his curatorship, the RBCM's entomology collection has grown from a few thousand specimens to the present day collection of over 250,000. He has also written text for, and contributed to the planning of, a wide range of museum exhibits.

While he publishes on many kinds of insects, his research focuses on the diversity and evolution of dragonflies and robber flies. Books that he has authored or co-authored include *The Dragonflies of British Columbia* (1977), *The World of Fresh Water* (1998), *Introducing*

Rob Cannings receives the Bruce Naylor Award in Ottawa on 27 October 2009. **Left to right:** Pauline Rafferty, CEO, Royal BC Museum and President of the Alliance of Natural History Museums of Canada; Rob Cannings; Bill Greenlaw, CEO, Nova Scotia Museum and Chair of the Awards Committee.

the Dragonflies of British Columbia and the Yukon (2002) and *The Systematics of* Lasiopogon (Diptera: Asilidae) (2002).

He joined forces with his brothers, biologists Sydney and Richard, to produce Birds of the Okanagan Valley (1987), and his artistic talents were put to use to illustrate the White-headed Woodpeckers on the book's cover.

For many years he has served on the executive of the Entomological Society of British Columbia and was editor of the ESBC newsletter Boreus (which he started in 1981) until 1991. He is a member of the Arthropod Subcommittee of COSEWIC (Committee on the Status of Endangered Wildlife in Canada) and the British Columbia Invertebrate Recovery Team. He has also been active on the Scientific Committee of the Biological Survey of Canada (Terrestrial Arthropods).

"The thing that I've always tried to do is be broad in my interests, rather than always simply focusing on particular research and collections projects," says Dr. Cannings. "I've tried to be a bit of everything. I like to think this award recognizes that versatility. "

Periodically he teaches at the University of Victoria and has brought fourth-year students into the RBCM's labs to give them direct exposure to the kind of work done by museum biologists.

"I have never known anyone so well-rounded and devoted", says Mr. Kelly Sendall, Manager of Natural History at Royal BC Museum. "In my mind he is the epitome of what a curator in a natural history museum should be."

Cannings grew up in Penticton in the Okanagan Valley. His father was the photographer for the Agriculture Canada research station in Summerland. The young Cannings frequently hung around with the scientists. An amateur biologist, his father often took the family to the Penticton museum, and at times they would donate things they found in nature to the museum.

"I was a museum kid long before I ever came here," says Cannings. "Natural history and collecting were part of our life."

Cannings recalls that his family had a long shelf of natural history books, including handbooks produced by the RBCM (formerly the British Columbia Provincial Museum). Even at a young age, one of his ambitions was to write a museum handbook. His goal was realized with *The Dragonflies of British Columbia*, which was published before he joined the museum in 1980.

In 2008, the Okanagan University College recognized Dr. Cannings and his two brothers as Honorary Fellows for their contributions to the appreciation of nature through their writings, professional activities and dedication.

The Bruce Naylor Award is named for the former director of the Royal Tyrrell Museum of Palaeontology. Deceased in 2007, Dr. Naylor had also served as president of the ANHMC. The award was presented at a special reception of the ANHMC on October 27, 2009 in The Speaker's Reception Room in the Centre Block of Parliament Hill, Ottawa.

Created in 2003, the ANHMC now has 16 members from coast to coast. Its goal is to increase visibility of Canada's natural history museums, which are responsible for preserving precious collections of millions of specimens that are the record of our natural heritage. The network strives to build capacity in the areas of scientific research, collections development and education about the natural environment, for the greater benefit of all Canadians.

Editor's note - This article has been reprinted with minor change from a press release distributed 27 October 2009, by the Alliance of Natural History Museums of Canada (http://www.natural-historymuseums.ca/index_e.htm). The text of Rob's speech appears on pp. 189-190.

Bruce Naylor Award: Thank-you

Rob Cannings, Royal British Columbia Museum

27 October 2009

Speaker's Reception Room, Centre Block, Houses of Parliament, Ottawa

Madam President, Alliance members, ladies and gentlemen, mes chers amis:

Bonsoir. It's good to be here in Ottawa this evening surrounded by natural historians and other friends…

I sincerely thank the Alliance for honouring me with this year's Bruce Naylor Award. I'm truly delighted to receive it. I never met Bruce, but I wish I had. My good friend John Acorn, an Alberta entomologist and paleontologist, knew him well. When I asked John recently about Bruce he said: "Bruce! A great guy….a bit quirky, a very careful paleontologist and a damn good biologist. He was a great guy!" I'm sure I would have liked and admired him.

Also, to my many colleagues across Canada and around the world, and especially at the Royal BC Museum, where I have worked for 30 years, thank you for your help and friendship. My thanks to Pauline Rafferty, CEO of the museum, and her predecessors, for their support. To my wife, Joan, also a Royal BC Museum natural history colleague, thank-you for everything.

Tonight I'd like to tell you a personal story. It's a story that illustrates a critical function of a museum biologist's life – helping a kid; passing the torch.

Jim Grant was an extraordinary naturalist and professional entomologist in BC's Okanagan Valley, where I grew up. He was a great friend of my father and, from an early age, I considered him a friend and mentor. His encouragement was one of the main reasons that I became fascinated by insects in the late 1950s. He had the delightful habit of dropping by our house in Penticton with entomological treasures. Once he brought me the first Monarch butterfly caterpillar I had ever seen. In BC this is a very rare species and, to a young BC insect enthusiast, this iconic caterpillar was pure gold. Jim left it at our doorstep one summer day.

I raised that butterfly patiently and my Dad and I photographed it through the various stages of its growth. I still use some of those pictures in slide shows today. A camping holiday intervened during the pupal stage and I carried the jar the whole way. To my relief, the adult emerged the day after we got home. Then came the big moral dilemma – to let the butterfly go or put it in my collection. I had grown attached to the insect over the weeks that I'd raised it; killing it seemed a really bad idea. And Monarchs were rare in the Okanagan, so letting it go was sensible. But I knew I would probably never catch another, and I desperately wanted that specimen. In the end, the collecting urge triumphed. With considerable guilt, I carefully added the butterfly to my collection. And, as Jim taught me was critical for all my specimens, I made a label listing all the collection information and pinned it with the butterfly.

Now before coming to the Royal BC Museum, I was curator of the Spencer Entomological Museum at the University of BC. Dr. Walter Lazorko, a retired psychiatrist and expert amateur beetle researcher, frequently came to work in the collection. Walter was a tall, distinguished European gentleman, always in suit and tie. He was a character, usually rather morose and pessimistic. He had been through a lot. Among other things, in the chaos of the spring of 1945 he had smuggled his huge beetle collection across war-torn Europe from the Ukraine to Austria and, from there, brought it to Canada. An amazing feat! One day, while we were lamenting the state of amateur entomology in BC, he started talking about his pal, Jim Grant, my old Okanagan mentor.

"There should be more people like Jim", said Walter, "He always encouraged kids – there would be more young entomologists if more of us were like Jim!"

Walter could get excited in a gloomy sort of way. "Why", he went on, "once when I was on a collecting trip with Jim at Penticton, way back about 1960, we found a Monarch butterfly larva on a milkweed plant…. Very rare. Jim said, 'I know a young boy who would love to have this.' Jim and I drove a long way up to this boy's house but he wasn't home, so we left the caterpillar in a bag attached to the door handle."

Walter's story stunned me. The caterpillar on the door was a family legend. "Walter", I said softly, "that young boy was *me*." Walter was even more flabbergasted – almost disbelieving. After a long silence, tears ran down his cheeks and he said with conviction, "You see, then you were a small boy and now you're an entomologist – that's what Jim did for you!" Of course, an exact cause and effect is a little far-fetched, but both incidents – the caterpillar on the door and the lunchtime conversation in the museum – have stayed with me.

Later, when I was president of the Entomological Society of BC, I helped create an award for the best graduate student paper delivered at our annual meeting. We call it the James Grant Award in honour of Jim's dedication to inspiring kids, to passing the torch.

All this is to say that a small act can go a long way in stimulating the quest for knowledge in children and adults alike. I hope that we all can do this, more and more, in our own museum work.

Thank-you all again. Merci.

On behavioural sex diagnosis

A woman walked into the kitchen to find her husband stalking around with a fly swatter:

'*What are you doing?*' She asked.

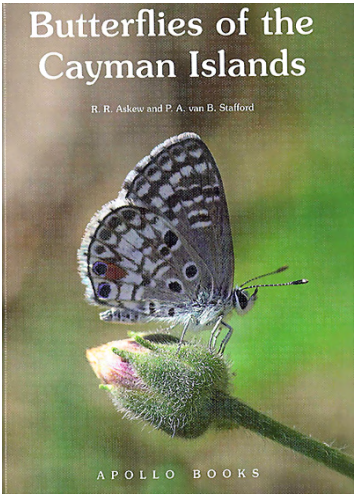
'*Hunting flies,*' He responded.

'*Oh! Killing any?*' She asked.

'*Yep, 3 males, 2 females,*' he replied.

Intrigued, she asked '*How can you tell them apart?*'

He responded '*3 were on a beer can, 2 were on the phone.*'



Butterflies of the Cayman Islands
Askew, R.R. and van B. Stafford, P.A. 2008.
Apollo Books, Stenstrup, Denmark
US $69.50, ISBN 978-87-88757-85-9
http://www.apollobooks.com/Cayman.htm

The Cayman Islands are three dots of land in the Caribbean Sea south of Cuba that are usually thought of by the rest of the world as an idyllic spot for a winter holiday or when they are hit by an occasional hurricane. However, they also have an abundance of marine and terrestrial wildlife, including a profusion of year-round tropical butterflies.

Many of the Caribbean Islands, especially the larger ones such as Jamaica, Cuba and Hispaniola, have had reference books and field guides to their butterfly species for a number of years. Not so for the Caymans until the release in 2008 of this handsome, hard-covered book, *Butterflies of the Cayman Islands*, that performs both these functions. Its 169 pages (17 × 24 cm) give more than adequate coverage of the 57 butterfly species that have been recorded on the three islands – Grand Cayman, Little Cayman and Cayman Brac – that make up this archipelago, a westward extension of the Sierra Maestra Mountains of Cuba.

The two authors of this book – Richard Askew and Ann Stafford – bring different, complementary perspectives to its writing. Dr. Askew, now retired from the University of Manchester, UK, has been a regular visitor to the Caymans since his first involvement there as the Entomologist on the Royal Society Expedition to the islands in 1975. Since that time, he has been monitoring population changes of Lepidoptera on the Caymans. Ms. Stafford, born in England, moved to Grand Cayman in 1973. As a resident butterfly observer on the islands, she has been keeping a diary of her records for a number of years and also maintains a butterfly-friendly garden.

Cayman butterflies have been covered in earlier and larger books of the butterflies of the West Indies by a number of authors, but never with the intricate and very useful local detail of this book. The 15-page introduction gives some background on the geology and vegetation of the islands. It also records earlier accounts of Cayman butterflies, including the famous 1938 expedition to the islands of the Oxford University Biological Expedition, and gives the status with checklists of the butterflies of each of the islands. The introduction also contains some more unusual information, such as changes to the butterflies over time, the effect of hurricanes on butterflies and affinities of the Cayman butterflies to the other Caribbean Islands, particularly Cuba and Jamaica. About one-third of Cayman butterflies are vagrants or temporary colonists, many of these recorded in more recent years. The Caymans have no endemic butterfly species, but they do have five endemic subspecies. A little more information in the introduction on threats to butterflies, such as urban and tourist resort development, would have been appreciated.

The majority of the book is given over to individual species descriptions that contain sections on recognition, subspecies, species' range, Cayman Island distribution, habitat, history and biology. The real strength of the book is the detail in these about three-pages-per-species write-ups. This section is also liberally sprinkled with many, mostly excellent, colour photographs of the majority of the species in nature, including a number of larvae photos. There are, as well, six

plates with spread specimens for all species. These are adequate for identification purposes, but many of the larger butterflies are reduced to 7/10 of the actual size to enable them to fit on the smaller page size. It is always disconcerting when you have full-size skippers bigger than reduced images of swallowtails on the same page.

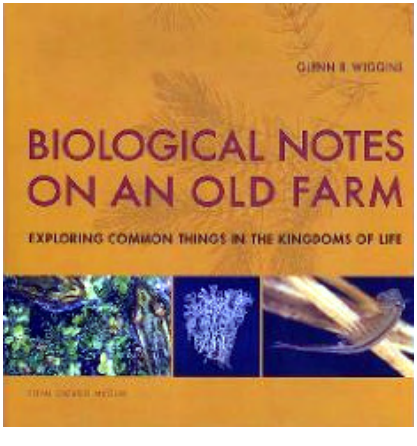
The closing sections of the book contain other useful material. The section on larval foodplants and nectar flowers tabulates the known plants on the islands that have been recorded as larval foodplants or adult nectar sources. These are classified as native or naturalized or as cultivated introductions. It also lists which butterfly species have been recorded on these plants. There is a section on butterfly-like moths that will be useful for visitors to the islands who may assume all brightly-coloured, larger, day-flying lepidopterans are butterflies. Anyone familiar with the beautiful, day-flying, migratory *Urania fulgens* that visits the Caymans periodically will understand that some moths surpass many butterflies in size and beauty.

In addition to a three-page reference section and an index to the English and scientific names contained in the text, the book ends with a listing of the Cayman butterflies that have been featured on postage stamps from the islands. Surprisingly, there are a total of 23 Cayman stamps featuring butterflies since 1977.

A final useful feature of the book is the appearance of maps of the West Indies and each of the three Cayman Islands on the inside of the front and back covers. The island maps name some of the better butterfly-sighting locales on each island that are also described in the text.

This attractive book fulfills a number of important functions related to the butterflies of the Cayman Islands. For interested island residents, it outlines what is known about their butterflies with insights on future species conservation needs. For island visitors, it is a handy introduction to the butterflies of the Caymans and where and when to best spot them. For the scientific world, it is a compendium of information and data on Cayman butterflies for future study to amass more knowledge and to better protect them in a world threatened by changes such as invasive species and global warming.

Peter Hall, Research Associate
Canadian National Collection of Insects
Agriculture & Agri-food Canada, Ottawa, ON



Biological Notes on an Old Farm: Exploring Common Things in the Kingdoms of Life. Glenn B. Wiggins. 2009. Royal Ontario Museum, Toronto, Ontario (available from www.rom.on.ca). 384 pages incl. drawings and colour photographs. Hardcover, $45. ISBN 978-0-88854-463-6

Biological Notes on an Old Farm is a well illustrated book written by Glenn Wiggins, a museum entomologist whose function has been as much the interpretation of a museum collection to the visiting public as it has been as a curator of a major natural history collection. This is a compendium of knowledge gleaned from observations and experiences on the old

Oakdale Farm located near the western edge of the Frontenac Arch in eastern Ontario. One-third of the book is dedicated to coverage of the insects. As an aquatic biologist/entomologist, the author shows his strong interest in water features that were part of the old farm landscape. This affinity is evident in the many examples of aquatic life that are skilfully and colourfully discussed, from freshwater sponges and water plants to a comprehensive coverage of insect life in temporary (vernal) pools. There is an appendix dedicated to life in temporary pools. Those unfamiliar with vernal pool communities will be fascinated by the assemblage of insects found in such habitats including permanent residents, overwintering spring and summer recruits, and non-wintering migrants. The author draws attention to this unique type of habitat in hope that teachers might be able to use the information to engage students. Indeed, this book could inspire young readers to pursue some aspect of entomology/ecology as a career. It is rich in references and supplementary comments also.

There is a useful chapter on the entomology of old houses where we learn about an insect community formed from a "select group of colonizers from around the world" that exploit human food and other items found in homes. This section suggests yet another possible focus for student investigation.

Reading this book was a joy and an inspiration. It is highly recommended for students and teachers, budding naturalists and encouraging parents, curious entomologists interested in reading about the commonplace that can be easily overlooked, and informed observers of natural history. Not only does this book stand as a legacy to the author and his experience but it also features the collective work of skilled biological illustrators. This book stands as a living testament to natural history and to a web of life now secured by a long-term conservation easement of Oakdale Farm to the Nature Conservancy of Canada.

Marilyn H. S. Light
Orchid Specialist Group/SSC/IUCN
Gatineau, QC

Books available for review:

Fireflies, Honey and Silk. Waldbauer, G. 2009. University of California Press. 233 pp.

Insect Biodiversity: Science and Society. Foottit, R. and Adler, P. (eds.). 2009. Wiley-Blackwell. 632 pp.

Please send correspondence regarding book reviews to the Chair of the Publications Committee:

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ESC Publications Committee
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Natural Resources Canada
1219 Queen Street East
Sault Ste. Marie, ON P6A 2E5
Tel: (705) 541-5640 Fax: (705) 541-5700
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Ernest August Mengersen
(1945 – 2009)

The Entomological fraternity and Olds College lost a revered member and an outstanding teacher when Ernest Mengersen passed away on 20 July 2009 at the age of 64 in the Linden Nursing Home.

Ernest was born 18 June 1945 in Yellowknife, formerly Northwest Territories, to August F. and Johanna (Poetzsch) Mengersen. He had a sister Rose Marie. The family moved to Duncan in 1946 and later to Campbell River, British Columbia. Ernest spoke only German until he enrolled in Grade 1. Ernest took his elementary and secondary education in Campbell River. He received a Grade 13 diploma at Concordia College in Edmonton in 1964. He then returned to Campbell River and worked in a paper mill for two years. He attended Concordia Teacher's College in Seward, Nebraska, from 1966 to 1970 earning a BS Ed degree. While there, Ernest met and then married Karen June Petersen on 10 August 1966, in Whittier, California. Ernest then took graduate studies at Oregon State University in Corvallis, majoring in Entomology and minoring in Zoology. He left his graduate studies to teach Grades 7 and 8 at St. John's Lutheran School in Stony Plain, Alberta from 1972 to 1973. He then took on a job as dairy herdsman in the Stony Plain area and, at the same time, attended the University of Alberta where he earned a BSc Ag degree in June 1974. Ernest was a crop inspector for the Plant Products Division of Canada Agriculture from 1974 to 1976. In September 1976 he took a contract position at Olds College to teach a wide range of Agriculture courses from Botany to Entomology. He became a permanent staff member in September 1977. He began the Master of Pest Management program at Simon Fraser University from September 1989 to August 1990 but health problems prevented him from graduating. Ernest had severe angina in 1992 that required two angioplasties. Heart

Ernest proudly displays his 'Moth Mobile'

problems kept recurring and these eventually resulted in his leaving Olds College in February 2004.

When Ernest arrived at Olds College, there was a collection of around 10 000 insects, put together by Buck Godwin and Buck's students. When Ernest left the College, the collection had approximately 55 000 specimens. Most of the additions were made by Ernest, but many were made by his students, especially through insect collections that they made as part of the entomology classes that they took from Ernest. This collection is regarded to have the best representation of short grass prairie ecozone Lepidoptera in western Canada.

Hugh Philip and Ernest Mengersen were the authors of the widely used book, *Insect Pests of the Prairies*, which was published in 1989 by the University of Alberta, Faculty of Education. In the June 1989 Entomological Societies of Canada and Alberta publication, *Entomologists of Alberta*, authored by Paul Riegert, Riegert recognized "Ernest Mengersen for his yeoman effort to contact all living Alberta entomologists and obtain biographical details".

Greg Pohl of the Canadian Forest Service, made the following comments after learning of Ernest's passing: "I will miss his infectious enthusiasm for all things entomological – his interest and frequent visits to Edmonton in the 1990s were vital in building the community that is the Alberta Lepidopterist's Guild. I have fond memories of his visits to the Forestry collection with many a drawer of interesting specimens he'd collected, and a half-day full of visiting and excited chatter over the insect collection. Usually it was Lepidoptera he brought, but sometimes it was beetles or wasps, as he collected widely across many groups. He has certainly left his mark on the entomological community in Alberta, and he will be missed."

Ernest was the local organizer for the inaugural meeting of the Alberta Lepidopterist's Guild held at Olds College on 16 October 1999. Ernest was one of the founding members of the Guild. He was also the local organizer for the North American Lepidopterist's Society Conference held 27 July 2003, at Olds College. In an interview at that time he made the following comments. "Studying insects goes hand-in-hand with studying horticulture, because there are three times as many insects as there are species of plants. For every insect feeding on a plant there are many more insects feeding on that insect, so it's vital to understand the huge diversity and its impact. The insect world is a reflection of history, economics, science and our stewardship of the land. They are very important messengers of what might be coming next in our environment. We live in a fragile environment and every living thing, large or small, has an important role in the ecosystem. No one knows how far we can alter the environment with climatic change before we start to notice habitat changes, for example. But the insects are one of the first things to give clues to those answers."

Ernest loved teaching and was equally loved by his many students. He once commented: "When you walk into a classroom, it has to be the most exciting time of your life". He required his students to put together insect collections for his courses in agricultural, landscape and turf entomology and to identify the insects. As a result, many students developed a real love for, and a long-time interest in insects. He also did his best to keep in touch with his students. A typical comment by one of his former students is the following by Rob Hughes: "Ernest was my favorite teacher at Olds College. I always looked forward to, and couldn't wait to get to his entomology classes." Ernest loved his students and they were second in line to his insects. A typical absent-minded teacher, Ernest mentioned that, when he had his first session with a new class he would appoint one student to watch where he put down his glasses so that that student could tell him where to look if he couldn't find them at the end of the lecture.

Ernest kept the records for the Olds College weather station. He volunteered for a number of years with the Mountain View 4-H Dairy Club, and with Special Olympics Bowling. He served on the board of Horizon School when his son, Mark, was attending.

After leaving the College, Ernest purchased a Dodge truck which he had painted with a variety of moth images and which he called the "Moth Mobile". The above image shows Ernest proudly standing beside the new vehicle. Sadly, declining health prevented him from using the vehicle the way he had hoped.

Ernest was predeceased by his parents. He is survived by his wife, Karen; sons Michael, Matthew and Mark, daughter Sarah, son-in-law Joe Shandera, their children Kieren and Talon; sister Rose Marie Fleming, step-brother Tedd Bobb, and their families. Sarah and Joe Shandera had a daughter, Isla Rain that was born on 10 August 2009. A Memorial Service was held at the Olds Church of the Nazarene on Saturday, 25 July.

This article could not have been written without the extensive input provided by Ernest's wife Karen. This help is gratefully acknowledged.

Charles Durham Bird, Erskine, AB
Ken Fry, Olds College, Olds, AB

Nora Urquhart (1908 – 2009)

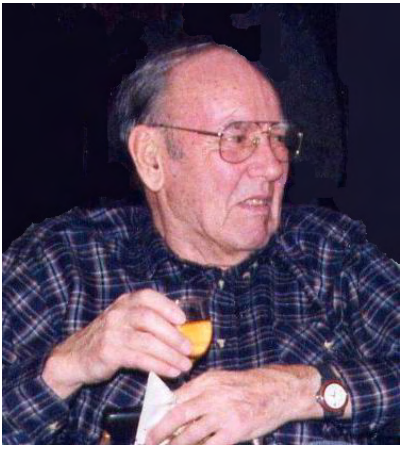
Nora Urquhart, wife and research partner of the late Professor Fred Urquhart (for obituary, see *ESC Bulletin* 37(1):48), died in March 2009. Though Nora was not an entomologist, she had remarkable organizational skills and was greatly important in the pioneering studies of her 'sometimes absent-minded' husband on the monarch butterfly. In addition to organizing files and data, she responded to some 1 200 items of mail received each year. She was also extensively involved in the field work and tagging program for monarchs, which resulted what has been described as one of the greatest entomological discoveries of the 20th century – the finding of the monarch's overwintering sites in Mexico. Along with her husband, Nora was appointed to the Order of Canada in 1998.

Cedric Gillott, Saskatoon, SK
with information by Don Davis, Toronto, ON

Robert Roughley (1950 – 2009)

Dr. Rob Roughley passed away suddenly on 9 November 2009. Born Robert Edward Roughley in Guelph, Ontario in 1950, he was the youngest son of Jack and Ada Roughley. Rob worked at the University of Manitoba for over 25 years, as a Professor of Entomology. He touched the lives of many scientists, students and fellow professors with his love of science and his zest for life.

A more complete obituary will appear in the March issue of the *Bulletin*.



Charlie A. Miller

1921 – 2009

Charlie Miller died peacefully in his sleep 26 November 2009, in Edmonton, Alberta. He was just one day short of his 88th birthday. He was predeceased by his wife Muriel, his parents, Christine and Otto Schleicher, and an infant brother. He is survived by his son Paul (Kim Mackie), Edmonton, and his daughter Susan (Al Sosiak), Calgary, and four grandchildren.

Charlie was well known among both Canadian and US forest entomologists, particularly for his leading role in spruce budworm research. Under the name C.A. Miller, he was the author of many reports, publications, position papers, and was a major contributor to the landmark ESC Memoir on spruce budworm that helped make its author, Dr. R. Frank Morris, the first ESC Gold Medalist. It was Charlie who developed many of the sampling methods still in use for defoliators, and continued to encourage further research in population dynamics after Frank Morris' retirement. His research accomplishments are described in a little more detail in the account of his retirement (*Bulletin ESC* 14:47).

Charlie was a Fellow of the ESC, and served from 1978 to 1983 as Assistant Scientific Editor of *The Canadian Entomologist* and *Memoirs*. He was a member of the Acadian Entomological Society, and served as President in 1956-57.

Charlie was born in Montreal (because caesarian sections were not available in New Brunswick) in 1921. He studied to be a teacher in 1939-40, but then enlisted in the Royal Canadian Air Force. He was a pilot who served first in Canada, and later with Coastal Command in Britain. He was discharged after the war with the rank of Flying Officer.

With the availability of help from the Department of Veteran's Affairs, as many ex-servicemen did, he went for more education. He graduated from the University of New Brunswick in Forestry in 1947. While he was a student, Charlie worked summers for the Forest Biology Division of Agriculture Canada (now a component of the Canadian Forestry Service). He then earned an MSc at the University of Toronto under the supervision of Carl Atwood. Charlie was urged by colleagues to go for a DSc at the University of London, where it could be had based on the research he already had accomplished. Charlie characteristically declined the advice, because the work he loved was reward enough, and he didn't need a fancy title.

While in Toronto, he met his future wife and companion, Muriel. It is rumoured that she persuaded him to change his name to Miller, and she became the star around which he revolved. To appreciate her vivacious personality and sense of humour, check out her story "My Life With the Spruce Budworm" (*Bulletin* ESC 16:70-73).

The Millers lived just down the street from the Eidts. Charlie and I commuted together, worked together, and hunted together. Commuting to work on the one ancient bridge at that time, and through the congested downtown was a skill carefully honed. Charlie's name for it was "offensive driving". Charlie's research accomplishments speak for themselves. Hunting, on the other hand, was an obsession, ducks in particular, and he and his dog Blue kept the table well supplied.

Charlie's father was a fisherman (and a rumrunner during prohibition) so Charlie loved boats and wouldn't scoff at rum. Charlie and Muriel lived on the beautiful Saint John River and its tributaries in the summer. In the winter he curled.

In 2001, Charlie was in a car accident that slowed him down considerably. He had lost his beloved Muriel, his hunting dog, and his children had moved to Alberta, so he moved to Edmonton to be near his son, Paul. I visited him there on two occasions, where things were somewhat better for a while, but were not to last.

Charlie's legacy is his research record, his service to the ESC and AES, his children, his grandchildren, and many fond memories.

Doug Eidt, Fredericton, NB

Paul Fields

Standing committees / Comités permanents

Nominations / Nominations
P. Fields, Chair, Winnipeg
R. Hallett, Guelph
M.-P. Mignault, Ottawa
M. Evenden, *ex officio*, Edmontonn

Elections / Élections
T. Chapman, Chair, St. John's
M. Evenden, *ex officio*, Edmonton

Continuing committees / Comités en cours

Achievement Awards / Prix d'excellence
P. Mason, Chair Ottawa
L. Dosdall, Edmonton
J. Cossentine, Summerland
K. Floate, Lethbridge
S. Smith, Toronto
M. Evenden, *ex officio*, Edmonton

Annual Meeting / Réunion annuelle
T. Shore, Chair, Victoria
W. Riel, Victoria
B. Elliott, Winnipeg
J. Huber, Ottawa
A. Thielman, St. Catharines
M. Evenden, *ex officio*, Winnipeg

Bilingualism / Bilinguisme
V. Martel, Chair, Rennes (France)
M. Wu, St.-Jean-sur-Richelieu
M.-P. Mignault, Ottawa
M. Barette, St.-Jean-sur-Richelieu
M. Evenden, *ex officio*, Edmonton

Bylaws, Rules and Regulations / Règlements
W. Riel, Chair, Victoria
P. MacKay, Winnipeg
M. Evenden, *ex officio*, Edmonton

Finance / Finance
S. Brooks, Chair, Ottawa
M. Erlandson, Saskatoon
P. Bouchard, *ex officio*, Ottawa
M. Evenden, *ex officio*, Edmonton

Headquarters / Siège social
C. Schmidt, Chair, Ottawa
J. Cumming, Ottawa
P. Bouchard, *ex officio*, Ottawa
M. Evenden, *ex officio*, Edmonton

Heritage / Patrimoine
C. Gillott, Chair, Saskatoon
R. Lamb, Winnipeg
J.-P. Bourassa, Trois-Rivières
M. Evenden, *ex officio*, Edmonton

Insect Common Names / Noms communs d'insectes
M. Roy, Chair, Ste-Foy
H. Goulet, Ottawa
M.-P. Mignault, Ottawa
J.-F. Landry, Ottawa
S. Laplante, Aylmer
M. Evenden, *ex officio*, Edmonton
B. Haack, *ex officio*, East Lansing, MI (Chair, Ent. Soc. of America Common Names Committee)

Marketing / Marketing
K. Hillier, Wolfville
C. Olivier, Saskatoon
M. Salomon, Vancouver
M. Evenden, *ex officio*, Edmonton

Membership / Adhésion
T. Shore, Victoria
W. Riel, ESBC, Victoria
L. Dosdall, ESA, Edmonton
M. Erlandson, ESS, Saskatoon
T. Galloway, ESM, Winnipeg
H. Douglas, ESO, Ottawa
S. Rochefort, SEQ, Lac-Beauport
C. Parsons, AES, St. John's
A. Thielman, St. Catharines
M. Evenden, *ex officio*, Edmonton

Publications / Publications

P. de Groot, Chair, Sault Ste. Marie
G. Boivin, St-Jean-sur-Richelieu
K. MacKenzie, Kentville
F. Sperling, Edmonton
C. Cutler, Truro
W. Strong, Vernon
R. Bennett, *ex officio*, Victoria
C. Gillott, *ex officio*, Saskatoon
R. West, *ex officio*, Portugal Cove
M. Evenden, *ex officio*, Edmonton

Science Policy and Education / Politique scientifique et éducation

M. Cusson, Chair, Ste-Foy
W. Riel, ESBC, Victoria
L. Dosdall, ESA, Edmonton
M. Erlandson, ESS, Saskatoon
T. Galloway, ESM, Winnipeg
H. Douglas, ESO, Ottawa
S. Rochefort, SEQ, Québec
C. Parsons, AES, St. John's
G. Zilahi-Balogh, Kelowna
D. Huber, Prince George
A. Bennett, Ottawa
M. Evenden, *ex officio*, Edmonton

Student Affairs / Affaires étudiantes

A. Thielman, St. Catharines
L. Pinault, St. Catharines
J. Forrest, Toronto
L. Andreassen, Winnipeg
T. Wist, Edmonton
J. Renkema, Dalhousie
J. Myers, *ex officio*, Vancouver
M. Evenden, *ex officio*, Edmonton

Student Awards / Prix aux étudiants

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

Web Content / Contenu Web

M. Cusson, Chair Ste-Foy
R. West, Portugal Cove
Paul Fields, Winnipeg
K. Rondeau, Edmonton
M. Evenden, *ex officio*, Edmonton

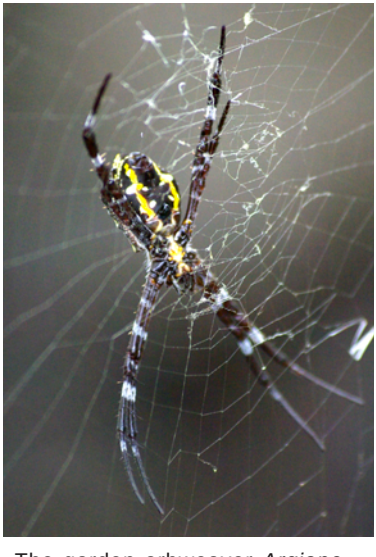
Ad hoc Business Plan / Plan d'affaires *ad hoc*

M. Cusson, Chair, Ste-Foy
G. Ball, Edmonton
C. Buddle, Montreal
R. Lamb, Winnipeg
G. Moreau, Moncton
C. Borkent, Ste-Anne-de-Bellevue

Representatives / Représentants

ESC representatives to Biological Survey of Canada / Représentants de la Commission biologique du Canada

F. Sperling, Edmonton



Olivier Lalonde

The garden orbweaver *Argiope appensa*, seen from beneath.

Actions from the Governing Board Meeting

Winnipeg, 17 October 2009

By Annabelle Firlej, Secretary

Treasurer

In 2008, net revenue was $33 339, comparing favorably to the net expenditure of $4 995 in 2007. P. Bouchard will step down in 2010 and will be replaced by S. Brooks. Agriculture and Agri-Food Canada published several monographs in entomology in past years and agreed that ESC post them on the ESC website. The Board approved payment of up to $2 500 for the scanning of the Handbooks series monographs.

Auditors Report

The Treasurer and the Office Manager recommended changing the auditor to *Bouris, Wilson LLP* a local firm. The Finance Committee recommended that this decision be presented to the AGM.

Report from the Office Manager

The Office Manager reported that many paper copies of *TCE* and Memoirs back issues are available at headquarters. The Publication Committee will write an announcement in the *Bulletin* and the Website that back issues could be sent upon members request and for up to 6 months after advertisement. After that time, paper copies of back issues stored in the headquarters will be sent to recycling. The Board approved changing Standing Rules with reference to the cost of back issues to be set at the discretion of the Treasurer.

ESC Headquarters Committee

Several renovations were completed this summer including the installation of new laminate flooring, walls being painting, and the re-building of the 2nd floor patio. The committee is still searching for a new tenant for the 2nd -floor apartment.

Finance Committee

The Committee recommended a decrease in membership fees for regular members outside of Canada from $100 to $90 to reflect a decrease in mailing costs. Division Editors of *TCE* and the Assistant *Bulletin* editor are Trustees. As such, they can apply for financial support to attend the ESC JAM and Governing Board Meeting. The Chair, G. Gibson, is stepping down and will be replaced by S. Brooks.

Ad Hoc Business Plan Committee

Library subscriptions to *TCE* decreased from 467 in 2008 to 370 in 2009. An announcement will be placed in the *Bulletin* to encourage members to approach their institution libraries to promote subscription to *TCE* and back issues. Also a pamphlet should be sent to subscribers when their subscription ends to ensure subscription renewals. All back issues of *TCE* and Memoirs are now scanned and available on the NRC Press website. The ESC President will request that NRC Press provides electronic copies of back issues. *TCE* made a profit of $30 313 in 2008 due to lower page numbers, which are increasingly of concern. P. Fields is stepping down after chairing 2 years and a new Chair will be appointed.

Scientific Editor

One hundred and eleven manuscripts were received from October 2008 to September 2009. Of these, 40 were accepted, 18 are in review, and 53 have been rejected. Five C.P. Alexander

articles are in production. The low submission of manuscripts is still a crucial problem. The Editor-in-chief will resign in October 2011 but will be willing to stay on if provided with remuneration. The Board requested that R. Bennett estimate the cost for the ESC to have a full-time Editor position. For the 'Instructions to Authors', the Editor will rewrite the paragraph regarding color printing. The Board recommends that the Treasurer negotiate with NRC Press to add a policy for single manuscript paper buying in the new contract and the Publications Committee should write the policy thereafter.

Editor – *Bulletin*

Production and shipping costs have been reduced due to fewer printing of hardcopies. The Editor suggested that eventually, the *Bulletin* would move to electronic copy and go away from paper copy. Kevin Floate was thanked for his excellent work as *Bulletin* Editor. Cedric Gillott was welcomed as incoming *Bulletin* Editor.

Web Site

The Webmaster requests pdfs for JAM proceedings from host regional societies. Heritage and Lab Profile sections have been added to the website, and will soon be updated with information for 2009. The announcement of the 2009 photo contest winners will be posted when the Publication committee provides details.

Web Content Committee

The Committee contracted Ms. Novotny to design interactive databases for the ESC website for: (i) a membership database (with online renewal and payment capabilities) and, (ii) a Common Names database. Although not included in the present contract, the development of an anonymous electronic voting system has been discussed with Ms. Novotny, and should be the product of an upcoming contract. The Board suggested that Ms. Novotny also develop a JAM registration page that would be hosted by the ESC website. However, registration fees would be paid via a Paypal account maintained by the host regional society. The Bylaws, Rules and Regulation Committee is updating the Standing Rules to include a permanent Web Content Committee.

Publications Committee

Chair K. MacKenzie is stepping down and a new Chair will be appointed. K. MacKenzie started changing the Publication Committee guidelines with the remaining work to be completed by the next Chair. C. Cutler is a new member of the Committee and will update the "Authorization to publish/Copyright Agreement". W. Strong, also a new member on the Committee, will lead the development of conditions of use for downloading material on the website. The addition of the photo contest to the Committee Guidelines needs much work and will be the duty of the next Chair.

Achievement Awards Committee

The Board approved a recommendation from the Chair, M. Evenden, to increase the number of member on the Achievement Award Committee from 3 to 5. This reflects the sensitive nature of the assignment and the fact that usually someone on the committee knows at least one of the nominees personally. A new award in honor of J. and B. Carr will be created and will support the research/ fieldwork of an amateur entomologist. Once the conditions of the award are finalized, the Achievement Award Committee guidelines will be changed. The new President and the Treasurer will write a memorandum of agreement for the funding of this award.

Insect Common Names and Cultures Committee

Few proposals of common names were received. The Insect Common Names database is being redesigned and will be available soon through the ESC website for consultation and submission of common names.

Membership Committee

In 2009, the membership was 478, which reflects a decrease from 2008. The Chair, G. Moreau, is stepping down and a new Chair will be appointed.

Student Awards Committee

Applications for student awards in 2009 were submitted electronically and placed on a secure web page for committee members.

Science Policy and Education Committee

The ESC has an interest in supporting an Access and Benefit Sharing (ABS) policy to let entomologists conduct their research with as few restrictions as possible, primarily because most of our work is for the public good. The Board endorsed the following "Policy Statement on Biodiversity Access and Benefit Sharing", which will be presented at the AGM (see AGM minutes). The Government of Canada recently decided to cancel the funding for the publication of monograph by NRC Research Press. This has stopped planned publication of several monographs that were being drafting or nearing publication stage, including some monographs in the field of entomology. The Board recommended that the ESC President send a letter to the Prime Minister and to the Minister of State (Science and Technology) to urge them to reverse this decision. *[Editor's note – Correspondence regarding federal cuts to science funding was published in the September issue of the* Bulletin *41(3): 128-132, 136-138.]*

Student Affairs

The update of the Directory of Entomology Education is still in progress. The Chair has started to keep track of the student representatives of each provincial society.

Marketing Committee

The committee emailed a request to a subgroup of ESC members that they contact their respective libraries to promote purchase of back issues of *TCE* and *Memoirs*. The same email will be sent to the whole membership. The revision of the ESC brochure/poster is an outstanding action item to be addressed when additional members join the committee.

Annual Meeting Committee

The next meeting will be held at the Coast Plaza Hotel & Suites in Vancouver, from 31 October - 3 November 2010. T. Shore continues to search for proceeding from previous JAMs.

Biological Survey of Canada

The BSC is now a federally incorporated not-for-profit organization. The BSC was hosted by the Canadian Museum of Nature, but the present arrangement will end in March 2010. An Executive Director should be hired pending the availability of funds. An application for an NSERC strategic grant was submitted in April 2009. The Board endorsed a Memorandum of Agreement between the BSC and the ESC. *[Details of the BSC's new structure were published in the September* Bulletin *41(3): 149-152]*

More Action Items: Governing Board Meeting, 20 October 2009

Committee Appointments

The Board approved a recommendation that a list of Committees and Representatives for 2009-2010 be prepared by the President and the President's appointees.

2009 Budget

The 2009 budget, once finalized following discussion between the incoming Finance Committee Chair and the Treasurer, will be sent to the Board for approval by e-mail ballot.

Modification of Page Charge Waiver Policy

A version of conditions for page charge waivers for the *Canadian Entomologist* will be sent to the Board for approval by e-mail ballot after revision by the Editorial Board, Publications and Finance Committee.

Minutes of the 59th Annual General Meeting

Fort Garry Hotel, Winnipeg, Manitoba

20 October 2009

President P. Fields called the meeting to order at 17:00 h. Forty-nine members were present.

1. Notice of Meeting. Notices of the meeting were published in the March and June 2009 issues of the *Bulletin* (Vol. 41) and on the ESC website.

2. Proxies. R. West for A. Firlej (Secretary), A. Thielman for H. Douglas (ESO), K. MacKenzie for C. Parsons (AES).

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

4. Deceased Members of the Entomological Community. A moment of silence was observed in memory of the following members of the entomological community who passed away during the past year: William Wellington, Reginald Salt, Philip Barker, Nora Urquhart and Graham Griffiths.

5. Minutes of the 58th Annual General Meeting. Minutes of the 58th Annual General Meeting were posted on the web site and published in the December 2008 issue of the *Bulletin* (Vol. 40). R. Lamb 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 P. Fields 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 including a strategic review of ESC committees and continued review of the ways to best ensure publication of the journal. The report from the Governing Board and regular updates

are published in the *Bulletin*. This particular report will be published in the December 2009 *Bulletin* (Vol. 41). The following changes to the Standing Rules were adopted and changes to Bylaws proposed for further adoption.

7.1 Change in Charge for Back Issues of *The Canadian Entomologist*

W. Riel moved and K. MacKenzie seconded that Standing Rule XII.9 (Publications) be changed

From:

XII.9. The price of back issues of *The Canadian Entomologist* shall be $70.00 per volume or $20.00 per number, effective 1 January 1983.

To:

XII.9. The price of back issues of *The Canadian Entomologist* shall be determined by the Treasurer. **Carried. Action: W. Riel**

7.2 Change in Page Charge Waiver for *The Canadian Entomologist*

W. Riel moved and N. Bostanian seconded that Standing Rule XII.7 (Publications) be changed

From:

XII.7. No more than 50 pages or 4%, whichever is least, of a volume of *The Canadian Entomologist* may be allocated to papers with page charges waived.

To:

XII.7. No more than 20% of a volume of *The Canadian Entomologist* may be allocated to papers with page charges waived. **Carried. Action: W. Riel**

7.3. Change in Dues

I. Otvos moved and D. Quiring seconded that Standing Rules II (Dues) be changed

From:

II.1. Annual dues for Regular Membership shall be eighty dollars ($80.00) in Canada and one hundred dollars ($100.00 Cdn) or equivalent in US dollars for members outside of Canada

To

II.1. Annual dues for Regular Membership shall be eighty dollars ($80.00) in Canada and ninety dollars ($90.00 Cdn) or equivalent in US dollars for members outside of Canada. **Carried. Action: W. Riel**

7.4 Change Web Content Committee from ad-hoc to Continuing Status

W. Riel moved and R. West seconded that Standing Rule VIII.1 be amended to include the Web Content Committee in the list of Continuing Committees. **Carried. Action: W. Riel.**

W. Riel moved and R. Lamb seconded that Standing Rule VIII.4 be amended with the addition of the following committee description:

VIII.4 (p) Web Content Committee

The Committee shall consist of four Members, one of whom shall be designated Chair. The object of the committee is to attract, provide and review content for the Society's website. **Carried. Action: W. Riel**

7.5 Change in the Number of Members of the Achievement Awards Committee

W. Riel moved and R. Lamb seconded that Standing Rule VIII.4 (a) be changed

From:

VIII.4 (a) Achievement Awards Committee

The Committee shall consist of three Members of the Society, one of which will be the First Vice-President of the Society.

To:

VIII.4 (a) Achievement Awards Committee

The Committee shall consist of *three to five* Members of the Society, one of which will be the First Vice-President of the Society. **Carried. Action: W. Riel**

7.6 Changes to Permit Electronic Balloting

W. Riel moved and C. Olivier seconded that Standing Rule VIII.4 be changed

From:

VIII.4 (c)

The Committee shall be responsible for monitoring the minutes of the meetings of the Society and Board and noting actions of the Board or General Meetings that indicate the need for changes in the By-Laws, Standing Rules, and Committee Guidelines. The Committee shall recommend to the Board where such changes should be made. Changes in the By-Laws after approval of the membership by a mail vote shall be submitted by the Secretary to Industry Canada for approval. Changes in the Standing Rules shall be presented to the Annual Meeting for approval. Changes in the Committee Guidelines shall be submitted to the Board for approval.

To:

VIII.4 (c)

The Committee shall be responsible for monitoring the minutes of the meetings of the Society and Board and noting actions of the Board or General Meetings that indicate the need for changes in the By-Laws, Standing Rules, and Committee Guidelines. The Committee shall recommend to the Board where such changes should be made. Changes in the By-Laws after approval of the membership *by a vote* shall be submitted by the Secretary to Industry Canada for approval. Changes in the Standing Rules shall be presented to the Annual Meeting for approval. Changes in the Committee Guidelines shall be submitted to the Board for approval. **Carried. Action: W. Riel**

W. Riel proposed the following amendments to the By-laws to allow electronic voting:

Amendment that By-laws VIII (Officers) be changed

From

VIII.4. The 2nd Vice-President shall be elected by annual mail ballot and shall fill the office of the 1st Vice-President when it becomes vacant.

To:

VIII.4. The 2nd Vice-President shall be elected by *annual ballot* and shall fill the office of the 1st Vice-President when it becomes vacant.

Amendment that By-laws IX (Directors) be changed

From

IX.2. One Director-at-Large shall be elected by annual mail ballot for a three-year term and shall take office at the end of the annual meeting following their election.

To:

IX.2. One Director-at-Large shall be elected by *annual ballot* for a three-year term and shall take office at the end of the annual meeting following their election.

Amendment that By-laws XIII (Elections) be changed
From
XIII.1. Elections shall be by secret mail ballot.
To:
XIII.1. Elections shall be by *secret ballot*.

Amendment that By-laws XIV (Quorum) be changed
From
XIV.3. In elections or other business conducted by mail ballot, twenty-five votes on any question shall constitute a Quorum.
To:
XIV.3. In elections or other business conducted by *ballot*, twenty-five votes on any question shall constitute a Quorum

Amendment that By-laws XX (Amendment of By-Laws) be changed
From
XX.1. The By-Laws may be repealed or amended by a two-thirds majority vote of a quorum of Active Members, providing that such repeal or amendment shall not be in force nor acted upon until approved as required by Industry Canada. The vote shall be by mail ballot.
To:
XX.1. The By-Laws may be repealed or amended by a two-thirds majority vote of a quorum of Active Members, providing that such repeal or amendment shall not be in force nor acted upon until approved as required by Industry Canada. ~~The vote shall be by mail ballot.~~

7.7 Amendment of By-Laws
W. Riel proposed that following amendment to the By-laws XX (Amendment of By-Laws) be changed
From
XX.3. Proposals to amend shall be shown to the Members for consideration at least twice, and at least two months shall elapse before they may be voted on. The vote shall take place no later than twelve months after the proposals have been received by the Secretary.
To:
XX.3. Proposals to amend shall be shown to the Members for consideration at least twice, with at *least a one month interval between first and second notification. During this time, member feedback on the proposed amendments shall be solicited*. The vote shall take place no later than twelve months after the proposals have been received by the Secretary.

8. Auditor's Report. P. Bouchard presented the Auditor's Report for 2009. The report was posted on the web site and summarized in the June 2009 issue of the *Bulletin*. P. Bouchard moved and B. Riel seconded that the Auditor's report be accepted. **Carried. No action required.**

9. Elections Committee Report. R. West read the Elections Committee report. Those elected were: M. Cusson, Second Vice-President; and F. Sperling, Director at Large.

10. Installation of Officers. M. Cusson, Second Vice-President, was escorted to the dais by T. Shore. P. Fields (outgoing President) then congratulated M. Evenden 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 M. Evenden thanked P. Fields for his service to the Society and presented him with a Service Award. A Service Award was presented to Kevin Floate in recognition of his excellent work as Bulletin Editor. Cedric Gillott was welcomed as the incoming *Bulletin* Editor.

12. Appointment of Auditor. P. Bouchard moved and T Shore seconded that Bouris, Wilson LLP be appointed as Auditor for 2009. **Carried**. **Action: P. Bouchard**.

13. Resolutions on behalf of the Entomological Society of Canada

13.1 Policy Statement on Biodiversity Access and Benefit Sharing

A policy statement on biodiversity access and benefit sharing was drafted by the Science, Public and Education Committee and adopted by the Board.

P Mason moved and J. Shorthouse seconded that:

Whereas the Convention on Biological Diversity (CBD), signed in 1992, promotes the equitable and respectful sharing of access to and benefits from genetic resources with a primary goal to protect genetic resources that potentially have commercial value for biomedical and agricultural applications. Parties to the CBD, including the Government of Canada, have agreed to develop an international Access and Benefit Sharing (ABS) regime to become effective in 2010.

Whereas the implications of the international ABS initiative will significantly affect taxonomic research – and collecting in general – in countries that implement laws that forbid collection and/or removal of specimens beyond their borders, and that such practices will result in gaps in species and geographical area covered when taxonomic work is done, making it incomplete, government policies and regulations on biological diversity can have critical disincentives to entomology. In particular, policies may negatively impact research on taxonomy and biological control. Research on biological diversity, discovery, and exportation of new biocontrol agents are now on hold in some countries.. The international community must reach an agreement on the ABS that would be acceptable to all parties. Attention must be given to economic, environmental, social, and cultural aspects related to the exploitation of the biological diversity.

Whereas the Entomological Society of Canada supports research that is for the public good either in terms of better crop yields or pest reduction or in terms of maintaining and improving global biodiversity, we also support the right of entomologists and other allied researchers to conduct their research under regulations that are meant to synergistically amplify the benefits of their work to society. We oppose restrictions to entomological research that will serve to slow or halt the development of creative new ideas that have potential to be used for the common good.

Therefore, be it resolved that the Entomological Society of Canada, calls on governments and the Convention on Biological Diversity to recognize the difference between profit-oriented bioprospecting and science-oriented research for the public good. We ask for them to find ways to facilitate non-commercial research-oriented collecting and the movement of specimens across borders, in their consideration of policies and regulations to be recommended in the Access and Benefit Sharing document.

Carried. Action: P. Mason

13.2 Thanks to the Organizing Committee

The following resolution was read by K. MacKenzie and accepted with a round of applause:

Whereas the Entomological Society of Canada has met jointly with the Entomological Society of Manitoba at the Fort Garry Hotel, Winnipeg, Manitoba; 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 Winnipeg 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 Fort Garry Hotel for their courteous assistance during the Meeting.

Action: A. Firlej

14. New Business. There was no new business.

15. Notice of 60th Annual General Meeting. The 60th Annual General Meeting will be held 31 October-3 November 2010 with the Entomological Society of British Columbia at the Coast Plaza Hotel in Vancouver, British Columbia. Further notices for the meeting will be published in the March and June 2010 issues of the *Bulletin* (Vol. 42) and on the ESC website.

16. Adjournment. President M. Evenden adjourned the 59th Annual General Meeting at 17:45 h following a motion by T. Shore seconded by W. Riel.

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 or achievements 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 not 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 2010** or e-mailed to the Chair of the Achievement Awards Committee (peter.mason@agr.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 accomplissements pertinents (3-5 pages) qui peuvent inclure, mais ne se limitent pas à: un résumé des sujets de recherche, en particulier les contributions majeures du candidat; le nombre 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. L'emphase doit être mise sur les accomplissements pertinents et non seulement sur les 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 agé 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 envoyés au bureau de la SEC dans une enveloppe cachetée identifiée "Confidentiel" au plus tard le **28 février 2010**, le cachet de la poste faisant foi, ou envoyé électroniquement au président du Comité des prix d'excellence (peter.mason@agr.gc.ca).

Nominations sought for Honorary Members and Fellows

Members of the Society are invited to nominate individuals as Honorary Members and as Fellows of the Society.

Honorary Members of the Entomological Society of Canada

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 2010** or emailed to the Chair of the Achievement Awards Committee (peter.mason@agr.gc.ca).

The Society currently has eight Honorary Members.

Fellows of the Entomological Society of Canada

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 2010** or emailed to the Chair of the Achievement Awards Committee (peter.mason@agr.gc.ca).

Mises en candidature pour les membres honoraires et les membres associés

Les membres de la Société sont invités à proposer des individus en tant que membres honoraires et associés de la Société.

Membres honoraires de la Société d'entomologie du Canada

Les membres honoraires sont considérés avoir apporté une contribution remarquable à l'entomologie et ne doivent pas inclure plus de 10 membres, ou 1% des membres actifs de la Société. Les nominations pour les membres honoraires doivent être appuyées par au moins cinq membres actifs ou spéciaux de la Société. Les nomination doivent être envoyées au bureau de la SEC dans une enveloppe identifiée « Confidentiel » au plus tard le 28 février 2010 (le cachet de la poste en faisant foi) ou envoyées par courrier électronique au président du comité des prix d'excellence (peter.mason@agr.gc.ca).

La Société compte présentement huit membres honoraires.

Membres associés de la Société d'entomologie du Canada

Les membres associés sont considérés avoir apporté une contribution majeure à l'entomologie, et ne doivent pas inclure plus de 10% des membres actifs de la Société. Les nominations pour les membres associés doivent être appuyées par au moins quatre membres actifs ou spéciaux de la Société, et doivent être envoyées au bureau de la SEC dans une enveloppe identifiée « Confidentiel » au plus tard le 28 février 2010 (le cachet de la poste en faisant foi) ou envoyées par courrier électronique au président du comité des prix d'excellence (peter.mason@agr.gc.ca).

Purchase the entire collection of

The Canadian Entomologist and *Memoirs of the ESC*

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This is a unique chance to complete your collection of *The Canadian Entomologist* and the *Memoirs of the Entomological Society of Canada*. *The Canadian Entomologist* has been in continuous publication since 1868, the *Memoirs of the ESC* from1955-1997. Yet many institutions have only partial collections of these classic entomological publications. This online archive will give readers access to a vast collection of significant entomological knowledge, subject to stringent peer-review, dating back to the beginning of scientific work in Canada and USA. Many key taxonomic and landmark ecology papers are available in these publications.

Our readers have been asking for electronic access to the thousands of articles published in these two publications. This online archive will have the complete collection of *The Canadian Entomologist* from 1868 until 2002, and the complete set of *Memoirs of the ESC*. Many of these volumes are now out of print and no longer can be purchased. *The Canadian Entomologist* from 2003 is available to electronic subscribers.

If you ordered the entire print back issues of these publications, it would cost over $12,000. Act now and purchase both online archives for $3200!

Web access is designed and maintained by NRC Research Press, the Government of Canada's scientific publication agency.

The Canadian Entomologist: volumes 1-134, 1868-2002, ISSN: 0008-347X
Memoirs of the Entomological Society of Canada: volumes 1-171, 1955-1997, ISSN: 0007-0741
Full index of authors, citation and abstracts
Entire text of articles is searchable
Over 12,000 articles in online archive
Articles can be viewed online or printed as Adobe pdf file format
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Available summer 2009

Act now and save!
Current subscribers receive 10% discount.

New benefits for publishing in *The Canadian Entomologist*: changes to page charge waiver policy and author charges for colour printing

New page charge waiver policy

The Entomological Society of Canada is implementing a new page charge waiver policy to supplement the one currently in place (http://www.esc-sec.ca/canent/page_charge_waiver_forms_English.pdf). The supplemental policy will apply on a trial basis commencing with manuscripts submitted to *The Canadian Entomologist* in October 2009. Members of the ESC will be offered a waiver of regular page charges covering up to 6 pages, for one accepted manuscript per year. ESC member authors will be able to choose whether or not to accept the waiver and, if accepted, the waiver will apply to all authors associated with a multi-authored paper. For example, if a group of co-authors containing one or more ESC members submits 2 manuscripts in one year that are 3 and 10 pages in length when published, the corresponding author can request that the waiver be applied to the 10 page paper even if it was submitted and accepted after the shorter paper. Furthermore, all co-authors of that paper will be considered to have been awarded the waiver and thus will be ineligible for a waiver on another paper in that year. The Editor-in Chief will monitor the progress of this policy for three years and its future will be decided during the 2012 Joint Annual Meeting.

Colour printing

Starting with the first issue of 2010 (volume 142, issue 1), printing of *The Canadian Entomologist* will be changed from an offset to a digital process. Readers should notice no change to the quality of the print edition but there will be significant benefits for authors of papers containing colour figures. Currently publication of colour images results in a charge of $1000 per coloured page in addition to regular page charges. With the adoption of digital printing, this additional charge drops to approximately $150 per coloured page. For example, an ESC member publishing an offset-printed 10 page paper containing 4 colour plates spread over 3 pages could expect a page charge bill of at least $3350 (10 pages @ $35/page plus 3 coloured pages @ $1000/page). The charges for a digital-print version will be $800 (10 pages @ $35/page plus 3 coloured pages @ $150/page). Although this is still a significant expense, authors (as per current policy) can choose to have their colour images published as grayscale in the print edition of *TCE* but retained as full colour in the reprint PDF file. Grayscale print / colour PDF publication works well where the images have good contrast and colour is not a critical feature of the figures. Most importantly, there is no additional charge associated with this approach.

New journal on pollination ecology!

The *Journal of Pollination Ecology* is a new, open access online journal that promotes the exchange of original knowledge and research in any area of pollination issues. It publishes peer-reviewed original research articles, short communications and review articles in all fields of pollination.

More information on this new journal appears at: http://www.pollinationecology.org/

Nouveaux bénéfices lors de la publication dans *The Canadian Entomologist*: changements à la politique d'exemption des frais de publication et aux frais pour l'impression en couleurs

Nouvelle politique pour l'exemption des frais de publication

La Société d'entomologie du Canada mets en place une nouvelle politique d'exemption des frais de publications afin de compléter celle qui est présentement en place (http://www.esc-sec.ca/canent/page_charge_waiver_forms_Francais.pdf). La politique complémentaire s'appliquera d'abord sur une basse d'essai débutant avec les manuscrits soumis à *The Canadian Entomologist* en octobre 2009. Les membres de la SEC se feront offrir une exemption des frais réguliers de publication couvrant jusqu'à 6 pages par article publié par an. Les auteurs membres de la SEC pourront choisir d'accepter ou non l'exemption, et s'ils l'acceptent, l'exemption s'appliquera à tous les auteurs associés lors des articles à multiples auteurs. Par exemple, si un groupe de co-auteurs contenant un ou plusieurs membres de la SEC soumettent deux manuscrits, de 3 et 10 pages de longueur lorsque publiés, en un an, l'auteur de correspondance pourra demander que l'exemption s'applique sur l'article de 10 pages même s'il a été soumis et accepté après l'article plus court. De plus, tous les co-auteurs de cette article seront considérés comme ayant obtenu l'exemption et ne pourront donc plus être éligibles pour une exemption sur un autre article dans cette même année. Le rédacteur en chef surveillera le progrès de cette politique durant trois ans et son avenir se décidera lors de la réunion conjointe annuelle de 2012.

Impression en couleurs

À partir du premier numéro de 2010 (volume 142, numéro 1), l'impression de *The Canadian Entomologist* passera d'un procédé 'offset' à un procédé numérique. Les lecteurs ne devraient remarquer aucun changement à la qualité de l'édition imprimée, mais il y aura des bénéfices considérables pour les auteurs d'articles contenant des illustrations en couleurs. Actuellement, la publication d'illustrations en couleurs amène des frais de 1000$ par page en couleurs, en plus des frais de publication réguliers. Avec l'adoption de l'impression numérique, ces frais additionnels chuteront jusqu'à environ 150$ par page en couleurs. Par exemple, un membre de la SEC publiant par 'offset' un article de 10 pages contenant 4 illustrations en couleurs réparties sur 3 pages pourrait recevoir une facture d'au moins 3350$ (10 pages à 35$/page plus 3 pages en couleurs à 1000$/page). Les frais pour une version imprimée numériquement seront de 800$ (10 pages à 35$/page plus 3 pages en couleurs à 150$/page). Quoique ces dépenses soient encore considérables, les auteurs (de par la politique actuelle) peuvent choisir la publication de leurs images en couleurs en niveaux de gris lors de l'édition imprimée du *TCE*, mais conserver les couleurs dans la version en PDF. L'impression en niveaux de gris avec la version PDF en couleurs fonctionne bien lorsque les images ont un bon contraste et que les couleurs ne sont pas critiques pour les figures. Plus important encore: il n'y a aucuns frais additionnels associés à cette approche.

Scarabs newsletter

The 46th issue of the Scarabs newsletter is now available for downloading. It can be found at The Coleopterists Society webpage: http://www.coleopsoc.org/default.asp?Action=Show_Resources&ID=Scarabs and should be posted soon at University of Nebraska's Scarab Central: http://www-museum.unl.edu/research/entomology/Scarabs-Newsletter.htm.

The Pest Management Research Report (PMRR)

The Pest Management Research Report (PMRR) is a periodical to facilitate the rapid exchange of information on Integrated Pest management (IPM) among persons involved in research and advisory services on IPM of plant diseases and insect pests in the agri-food sector of Canada. The 2009 and previous issues of PMRR can be viewed at the following link:
http://www.cps-scp.ca/Pest_Mangement-reports.shtml

Diane Holmes
Pest Management Centre
Agriculture and Agri-Food Canada
Ottawa, ON
Email: Diane.holmes@agr.gc.ca

Congratulations to Steve Marshall's Insect Lab!

Dr. Marshall's lab was the winner of a Halloween pumpkin carving contest at the University of Guelph. Their prize-winning entry was styled after a *Eurytoma* parasitoid attacking a goldenrod gall fly maggot inside a gall (the pumpkin). For the wasp, beans were used for the legs and antennae, parts of dyed pumpkins comprise the body and head, a gourd was used for the abdomen, okra was used for the ovipositor, and the eyes are jubejubes. The fly maggot is made out of several onions. The photograph below is a composite of two images highlighting both the external and internal features of the 'gall'.

Morgan Jackson

The man behind the gavel

Back in the late 1980s when Jeremy McNeil and I were charged with heading the governing body of this Society, we took note of the 100th anniversary of the Entomological Society of America. We thought that something more than words would be an appropriate recognition of this momentous event. I suggested that we might present them with a gavel and a sound block, remembering the much appreciated gavel made from a special prairie willow that the Entomological Society of Alberta had given the ESC much earlier. (Is it still in use?) It just so happened that a Fredericton area wood-turning artist was just beginning to make a name for himself, and we asked him to make them. Somewhere in the ESC files is a letter of thanks from the Entomological Society of America for that gavel and sound block. The details are probably buried somewhere in the *Bulletin*, but I can't find where.

On September 25, 2009, that artist, Gordon Dunphy, died at the age of 74. He had become recognized as one of Canada's most gifted artists. His pieces are owned by collectors the world over and some are in the Beaverbrook Art Gallery collection. When he was diagnosed with terminal cancer he fashioned an urn from yellow birch and willed that his ashes be placed in it, that his son turn a lid for it, and it be given to the Gallery. This was received by the gallery with the curator's comment that it was not unusual for artists to donate their works, but it was the first time they had taken an artist into the collection.

Gordon's studio was in the home he built himself on a heavily wooded hillside overlooking the Nashwaak River, just outside Fredericton. He loved wood, the woods, and the creatures that lived in it. He told me of seeing from his house salmon jumping, and bears looking for a salmon meal. He was a naturalist as well as an artist, and left a small, humble, environmental footprint on the world.

Perhaps the ESA will take note of this story, and recognize that their gavel has more than just utilitarian value.

Doug Eidt
150 Mactaquac Heights
Keswick Ridge, NB E6L 1P2

ESC gavel and sound block

Editor's note. The gavel and sound block presented by the Entomological Society of Alberta to the ESC is still used regularly at meetings of the Society. The inscription on the plate attached to the sound block reads as follows: "Entomological Society of Canada 1863-1963 from the Entomological Society of Alberta"

Course announcement for 'Semiochemicals in Pest Control and Conservation Biology'

Intended to teach graduate students and post-docs on the applications of pheromones, kairomones and other semiochemicals, this course is organized by the Department of Ecology, Lund University and the Department of Plant Protection Biology, Swedish University of Agricultural Sciences. It will take place in Lund, Sweden, 15-26 March 2010.

Scope

Since the first identification of a pheromone fifty years ago, the world of chemical signals has received much attention from scientists in biology, chemistry and agriculture/forestry. Many of the findings have come into practical use, mainly for monitoring or suppression of insect pests. Yet, a very small fraction of crop protection is based on semiochemicals despite their obvious advantages over conventional insecticides. Why is this and what can be done to increase the applied use of these sustainable alternatives? More recently, other possibilities to use odour signals have become obvious in e.g. detection of rare species. Can this be developed and used more widely in conservation biology? These are issues that will be dealt with during the course, which includes lectures of internationally recognized scientists, student presentations, exercises and discussions.

For more info and registration: http://www.pheromone.ekol.lu.se/semiochem-10.html

Registration deadline is 1 February 2010, and the maximum enrolment is 40 persons.

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(Continued from p. 220)

Did I mention that this is my last column as *Bulletin* Editor...? If not, I do so now. It has been a privilege to serve the Society in this role during the past three years, and I have enjoyed meeting many of you via e-mails or in person in regards to *Bulletin* submissions. Cedric Gillott will be the new Editor starting with the March issue. As was I, he will be very appreciative of your future submissions.

As for me, I've just received e-mail notification that I have won 1.5 Million Euros from the 'Once Lottery Promotion Program'. I need to run off now to send in my 'administration fee' so that I can collect my winnings. Strange thing is, I don't recall even entering this lottery… Hmmmm.

(Suite de la page 220)

Quant à moi, je viens tout juste de recevoir une notification par courriel m'avertissant que j'ai gagné 1,5 millions d'euros du « Programme de promotion de la loterie ». Je dois me précipiter pour envoyer mes « frais administratifs » afin de pouvoir collecter mes gains. Bizarre, je ne me rappelle pas avoir participé à cette loterie… Hmmmm.

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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: Kevin Floate
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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Rédacteur : Kevin Floate
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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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.

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The Buzz / Bourdonnements

By Kevin Floate, Editor / Rédacteur

Target your audience

I receive a disconcerting number of unsolicited e-mails each week. I mean, in addition to those from displaced children of African royalty placing their trust in me to help them launder unclaimed funds (all perfectly legal, of course).

The e-mails that concern me most, are those being distributed by the communications offices of various reputable organizations. Many of these e-mails announce funding received by staff or some 'astonishing' discovery. This might be of interest if at least some of these e-mails were of an entomological nature. Alas, this is rarely the case.

Most recently, I received word that a photograph taken by a graduate student at one university was to appear on an upcoming episode of a popular television series. Said photograph illustrated "*the degree of modification to saw mark characteristics of dismembered skeletal remains when exposed to a controlled outdoor fire of limited duration*". Yuck!

As *Bulletin* Editor, I solemnly vow that I will not adopt the practice of mass-mailing unsolicited e-mails to ESC members. Bad enough that you get spammed with e-mails advertising various pharmaceutical products, 'instant university degrees', and upcoming meetings in faraway lands on topics of absolutely no interest.

(Continued on p. 217)

Ciblez votre public

Je reçois un nombre déconcertant de courriels non sollicités chaque semaine. En plus de ceux provenant d'enfants de la royauté africaine qui mettent leur confiance en moi afin de les aider à blanchir leurs fonds (tout cela de façon parfaitement légale, évidemment).

Les courriels qui m'intéressent particulièrement sont ceux distribués par les bureaux de communication de différentes organisations réputées. Plusieurs de ces messages annoncent des fonds reçus par le personnel, ou quelque découverte incroyable. Ça pourrait être intéressant si au moins quelques-uns des ces courriels avaient une nature entomologique. Hélas, c'est rarement le cas.

Plus récemment, j'ai reçu un message disant qu'une photographie prise par un étudiant gradué d'une université ferait une apparition dans un épisode à venir d'une série télé populaire. La dite photographie montrait « le degré de modification des caractéristiques des marques de scies des restes de squelettes démembrés lorsqu'exposés à un feu extérieur contrôlé de durée limitée ». Beurk !

En tant que rédacteur du *Bulletin*, je jure solennellement que je n'adopterais pas la pratique d'envoyer massivement des courriels non sollicités aux membres de la SEC. C'est déjà assez d'être envahi de courriels promouvant différents produits pharmaceutiques, des « diplômes universitaires » et des réunions à venir dans des contrées éloignées sur des sujets n'ayant absolument aucun intérêt.

Ai-je mentionné qu'il s'agit de ma dernière colonne en tant que rédacteur du *Bulletin*? Si ce n'était pas déjà fait, je le fais maintenant. J'ai eu le privilège de servir la Société dans ce rôle durant les trois dernières années, et j'ai apprécié rencontrer beaucoup d'entre vous, par courriel ou en personne, en lien avec les soumissions au *Bulletin*. Cédric Gillot sera le nouveau rédacteur à partir du numéro de mars. Tout comme je le faisais, il appréciera vos futures soumissions.

(Continue à la page 217)

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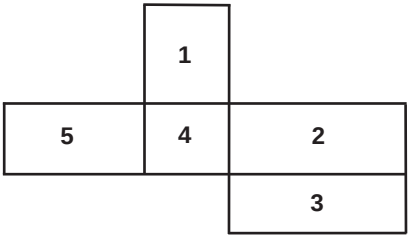

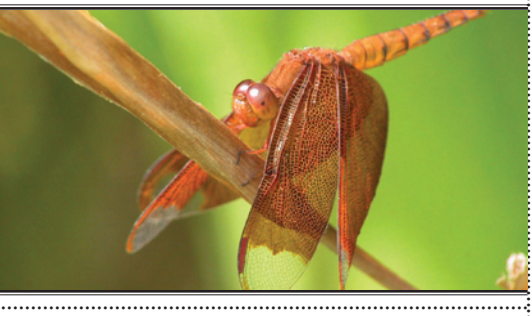

Images

On the spine: The lady beetle *Anatis labiculata* (Coleoptera: Coccinellidae) feeding on an adult *Uroleucon rudbeckiae* (Hemiptera: Aphididae). Photo: Pat MacKay
Beneath the title: The thistle gall fly, *Urophora cardui* (Diptera: Tephritidae), was introduced from Europe to North America for the control of Canada thistle, *Cirsium arvense*. Photo: Steve Marshall
1. Male Douglas-fir seed chalcid, *Megastigmus spermotrophus* (Hymenoptera: Torymidae). Photo: Dion Manastyrski
2. A mason wasp, probably *Ancistrocerus* sp. (Hymenoptera: Vespidae: Eumeninae). Photo: Joanne Bovee
3. A burnet moth, *Zygaena* sp. (Lepidoptera: Zygaenidae) on knapweed. Photo: Alicia Leroux
4. Checking weevil traps in strawberries. Photo: Kenna MacKenzie
5. *Misumena vatia* (Araneae: Thomisidae) mating and dining on a dance fly (Diptera: Empididae). Photo: Brian Klinkenberg
Back cover: A tropical dragonfly, *Neurothemis* sp. (Odonata: Libellulidae), cooling by thermoregulation, Thailand. Photo: Jeremy McNeil

Français à l'intérieur de la couverture avant

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