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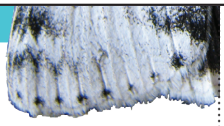

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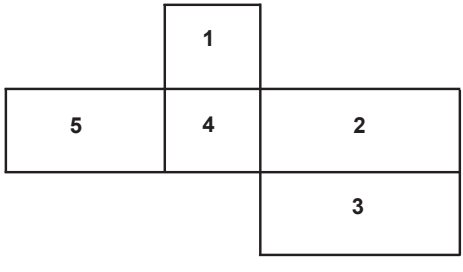
Images

Sur le dos : Le dendroctone du pin ponderosa, *Dendroctonus ponderosae* Hopk. (Curculionidae), une espèce épidémique qui détruit périodiquement de grandes surfaces de pinèdes dans l'ouest de l'Amérique du Nord. Photo : D. Linton.
Sous le titre : La likenée blanche, *Catocala relicta* Wlk. (Noctuidae), se nourrit de peupliers, de trembles et de saules. Photo : A. Carroll.
1. Récolte de scolytes (Curculionidés) dans un piège à entonnoir Lindgren à Angstad Creek, près de Merritt, Colombie-Britannique. Photo : J. Smith.
2. *Leptomantispa pulchella* (Banks) photographié à Ojibway Prairie à Windsor, Ontario. L'espèce n'est par ailleurs connue au Canada que de la vallée de l'Okanagan. Photo : S. Marshall.
3. Puceron de l'épinette de Sitka, *Adelges cooleyi* (Gill.) (Adelgidae), exule parthénogénétique avec ses oeufs sur sapin Douglas. Photo : B. Bains.
4. *Formica aserva* Forel (Formicidae), une fourmi agressive qui niche dans les grands débris ligneux partout au Canada, portant une nymphe. Photo : R. Higgins.
5. Cécidomyie du blé, *Sitodiplosis mosellana* (Géhin) (Cecidomyiidae), femelle. Photo : R. Lamb.
Plat inférieur : *Tetragnatha viridis* Walck. (Tetragnathidae), seule araignée orbitèle à grands appendices buccaux et à couleur vert brillant au Canada; sa répartition s'étend vers le sud de l'est de l'Ontario et de la Nouvelle-Écosse jusqu'à la rive nord du golfe du Mexique. Photo : M. Larrivée.



Up front / Avant-propos

Peggy Dixon, President of ESC / Président de la SEC

Recently I was in Ottawa for the mid-term meeting of the ESC Executive Council. This meeting is always held at our Headquarters on Winston Avenue, a two-story white house which is a treasure trove of old documents and publications. I had the exciting opportunity to inspect the very first volume of *The Canadian Entomologist* (*TCE*). It was quite a humbling experience to hold this original document, dated 1868, and to think that we have been in existence, and publishing *TCE*, for almost 140 years. The first issue in August 1868, was just 8 pages long and included colourful descriptions of various fireflies and Lepidoptera by Reverend C.J.S. Bethune and W. Saunders, as well as a recipe for a "New Fluid for Preserving Larvae" and an account of the 1868 AGM. Other issues in that first year contained "Descriptions of new Canadian Ichneumonidae", "A musical larva", several "Notes on Canadian Lepidoptera", "Spider nests", "Parasites in the cells of *Vespa maculata*" and "Northern insects". The purpose of *TCE* as described in 1868, is interesting: "Correspondence is invited respecting the habits, localities, occurrence, etc., of insects, as this journal is intended to be a medium for the recording of observations made in all

J'étais récemment à Ottawa pour la réunion de mi-session du Conseil exécutif de la SEC. Cette réunion se tient toujours à notre siège sur l'avenue Winston, une maison à deux étages, véritable coffre aux trésors rempli de documents et de publications. J'ai eu la chance d'inspecter le tout premier volume de *The Canadian Entomologist* (*TCE*). C'est une expérience qui remplit d'humilité que de tenir ce document original datant de 1868, et de penser que nous existons, et publions *TCE*, depuis presque 140 ans. Le premier numéro d'août 1868 n'avait que 8 pages et incluait autant des descriptions colorées de différentes lucioles et lépidoptères par Rev. C.J.S. Bethune et W. Saunders que des recettes pour une nouvelle solution pour préserver les larves et un récit de l'assemblée générale annuelle de 1868. Les autres numéros de cette première année contenaient une description de nouveaux Ichneumonidés canadiens, un article sur une « larve musicale », plusieurs notes sur des lépidoptères canadiens, sur des nids d'araignées, des parasites de cellules de *Vespa maculata* et sur des insectes nordiques. L'objectif du *TCE* tel que décrit en 1868 est intéressant : « Les correspondances sur les habitudes, localités, occurrence, etc. des insectes sont les bienvenus, puisque ce journal se veut un medium permettant d'enregistrer les observations faites dans toutes les régions du pays; les insectes à identifier seront reçus avec plaisir, et retournés si désirés ». Bien sûr, en 1868, « le pays » n'était pas connu tel qu'il l'est aujourd'hui; le Canada avait seulement un an et consistait en quatre provinces : l'Ontario, le Québec, le Nouveau-Brunswick et la Nouvelle-Écosse. Le *Bulletin* de la SEC est plus récent, mais un coup d'œil à un des premiers volumes nous donne une image intéressante de notre Société il y a 34 ans. Lorsque le volume 5 a été publié en septembre 1973, le président était le Dr. D.K. McE. Kevan, le rédacteur du *Bulletin* était Dr. Doug Eidt et le trésorier était Dr. Ed Becker, qui écrit toujours « the Senior

parts of the country; insects for identification will be gladly attended to and returned when desired". Of course in 1868 "the country" was not as we know it today; Canada was just a year old and consisted of four provinces: Ontario, Quebec, New Brunswick and Nova Scotia. The ESC *Bulletin* is more recent but a look at an early volume provided an interesting snapshot of our Society 34 years ago. When volume 5 was published in September 1973, the President was Dr. D.K. McE. Kevan, Dr. Doug Eidt was *Bulletin* Editor and the Treasurer was Dr. Ed Becker, who still writes the Senior Entomologist's Newsletter and attends every annual meeting.

Over the past 140 years, much has changed for both *TCE* and for the ESC, from the nature of our studies to the technology we use both in our work and to manage the Society. This brings me to more recent Society business, particularly some of the issues discussed at the mid-term Executive meeting mentioned previously. A full summary of finances and Committee reports appears elsewhere in this *Bulletin* so I'll just highlight a few points. Although we are very pleased with our website, our webmaster Barry Lyons is in the process of arranging an overhaul. The site has been around for several years thanks largely to Barry, and is due for a facelift. Some of the website issues we are investigating are the technical and financial implications of being able to subscribe to or renew memberships electronically. Another issue addressed at this meeting was the efficiency of our ESC Committee structure. Bob Lamb and I will assess this issue to ensure we are making the best possible use of precious volunteer time.

Just before the Executive meeting I represented the ESC at the spring meeting of the Biological Survey of Canada (Terrestrial Arthropods). I was honoured to make a presentation on behalf of the Society to Dr. Hugh Danks, who in August will retire from his post as Head of the Biological Survey. No doubt Hugh's work will be referenced by entomologists 140 years from now!

Planning for the 2007 Joint meeting with the Entomologist's Newsletter » et assiste à la réunion annuelle chaque année.

Durant les 140 dernières années, beaucoup de choses ont changées dans *TCE* et dans la SEC, autant concernant la nature de nos études que des technologies utilisées dans notre travail et dans notre gestion de la Société. Ceci m'amène à des affaires de la Société plus récentes, particulièrement à certaines questions discutées lors de la réunion de mi-session du Conseil exécutif mentionnée précédemment. Un résumé détaillé des finances et des rapports des différents comités apparaissant ailleurs dans ce *Bulletin*, je ne mentionnerai que quelques points importants. Bien que nous soyons satisfaits de notre site Internet, le webmestre, Barry Lyons, est présentement en train de le moderniser. Le site Internet est en ligne depuis plusieurs années, en grande partie grâce à Barry, et il est maintenant prêt pour un « lifting ». Parmi les questions sur lesquelles nous nous penchons concernant le site Internet se trouvent les implications techniques et financières de pouvoir s'inscrire ou renouveler l'adhésion électroniquement. Un autre point soulevé lors de cette réunion est l'efficacité de la structure de nos comités. Bob Lamb et moi-même allons nous occuper de cette question afin de nous assurer que nous utilisons le plus efficacement possible le temps si précieux des bénévoles.

Juste avant la réunion du conseil exécutif, j'ai représenté la SEC à la réunion du printemps de la Commission biologique du Canada (Arthropodes terrestres). J'ai eu l'honneur de faire une présentation, au nom de la Société, au Dr. Hugh Danks qui se retirera de son poste d'agent principal de la Commission biologique en août. Il ne fait aucun doute que le travail de Hugh sera encore une référence pour les entomologistes dans 140 ans!

La planification de la réunion conjointe annuelle avec la Société d'Entomologie de Saskatchewan (30 septembre au 3 octobre 2007) s'effectue tranquillement. Gardez un œil sur le site Internet pour plus de détails (www.esc-sec.org/).

Finalement, l'été approche, bien que ce soit

Entomological Society of Saskatchewan (September 30-October 3) is proceeding smoothly. Keep an eye on the website for details (www.esc-sec.org/).

Finally, summer is coming, although that's hard to believe as I look out at the fog and rain this cold Newfoundland morning. In our lab we eagerly await the annual influx of summer and graduate students with all their enthusiasm and ideas. During this season of rejuvenation and renewal, I wish you all the best in your research, writing, sabbaticals and vacations.

assez difficile à croire en ce matin pluvieux et brumeux à Terre-Neuve. Dans notre labo, nous attendons avec impatience le flux annuel d'étudiants d'été et d'étudiants gradués emmenant avec eux leur enthousiasme et leurs idées. Durant cette saison de renouvellement et de rajeunissement, je vous souhaite ce qu'il y a de mieux pour vos recherches, rédactions, sabbatiques et vacances.

Bio-Blitz 2007

Where: Riding Mountain National Park
When: July 16-20, 2007
Why: To assist the park in documenting its insect fauna
Who: Anyone with an interest in collecting insects

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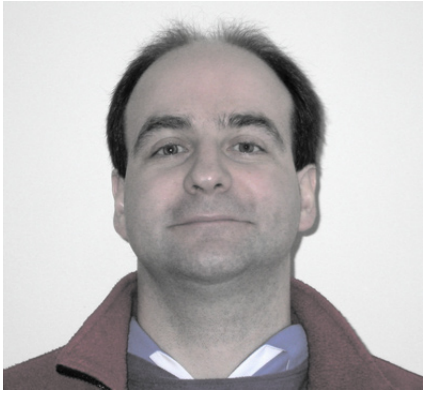
Moth balls / Boules à mites

By Andrew Bennett



How (not) to mount insects

Having taught introductory entomology labs for many years, I believe I am at least moderately qualified to offer advice regarding correct methods of insect preparation that maximize specimen quality and long-term preservation. But where's the fun in that? As the old adage goes, often we learn most from our mistakes. Therefore, in this issue, I will describe the most common ways I have seen to maim perfectly good specimens (having witnessed pretty much every method of butchery imaginable). Here are my top five ways to render an arthropod specimen completely useless to all but the hungriest dermestid. (For correct techniques, please refer to pages 11-22 of Borror and White, 1970).

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: bennetta@agr.gc.ca, telephone: (613) 759-1900.

Glue inclusions

This method of preservation is similar to the process by which an organism is imbedded in pine sap that over millions of years turns into amber. The main difference, as the name implies, is that in a glue inclusion, the matrix in which the specimen is imbedded is glue instead of amber. Often the presence of a glue inclusion indicates a previous failure to point a specimen properly (i.e., not enough glue caused the specimen to fall off the point). Overcompensation by the eager student at the next attempt results in large portions of the specimen becoming wrapped or immersed in glue. Unfortunately, unlike amber, the optical qualities of glue seldom permit viewing of key characters which are usually squashed, twisted and/or broken inside a semi-opaque mass of glue. This method of preservation is definitely one to be avoided unless you are a shareholder in Elmer's Products Inc.

Shish kebabs

When pinning specimens, use of the following rule can be helpful: If the width of the specimen is less than the diameter of your pin, your pin is probably WAY too large! Hints regarding the fact that you have chosen an excessively large pin include, but are not limited to: a) inability to see ANY of the dorsal surface of your specimen because of the dirty, great pin in the way; b) explosion of the mesopleura and extrusion of the thoracic musculature through the gaping cracks in the specimen; c) a popping sound made by the head and forelegs rocketing off the front of your specimen as you push the pin into your specimen. Any of these attributes will likely result in demerit points in the artistic portion of the grading of your insect collection. Unless, of course you are court entomologist to Vlad the Impaler, in which case, skewer away!

Pseudolepidoptera

Whereas butterflies can look quite striking

when spread properly, the same cannot be said of most other groups of insects. Ever seen a spread earwig? (Not a pretty sight, even if prepared well). In any entomology class, there is usually at least one student who takes the concept of spreading insects farther than all others (and invariably farther than it should be taken). Spreading insects other than butterflies would not be that much of a problem if not for the fact that most insect specimens are much smaller than your average sphingid or papilionid, and most spreading boards, even if they are adjustable, can't really accommodate a fungus gnat or a microhymenopteran. And of course, there is also the maddeningly difficult decision regarding how massive a pin is required to hold the body of your insect in place while the wings set (q.v. shish kebabs).

Raisins

Some arthropods were never meant to be dried and kept in little drawers. For example, spiders do not usually take kindly to being air dried and pinned or pointed, and yet I have seen it done on more than one occasion, usually by students who aren't clear on the whole "six-leg-versus-eight-leg" distinction (always a toughie). Then again, when the average number of legs remaining on your tray of pinned spiders is three, I can understand the confusion. Larvae also seem to fair none too well around some students' pins (I am remembering a nice series of shrivelled western tent caterpillars I once had the privilege of marking). The correct answer to this problem is, of course, alcohol (in so many ways).

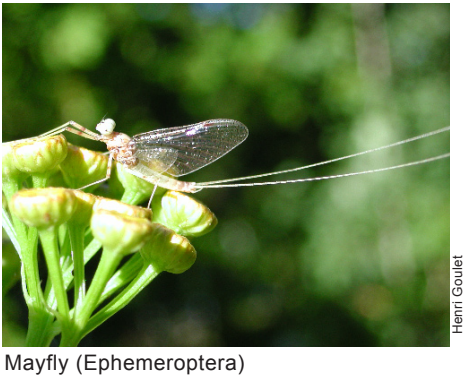
Specimens with a disability

The notion of an intact specimen (i.e. possessing a head, thorax and abdomen, and all requisite legs, wings and antennae) is a foreign concept to many students. Perhaps this lack of care towards mounting specimens with the correct number of appendages arises in some pupils because of a keen appreciation of bilateral symmetry and recognition that fully one half of all appendages are redundant in terms of their value to taxonomy. In actuality, a more plausible explanation why many specimens lack odd parts is because fingers, forceps, microscopes, shoes and the floor are a great deal harder than most dead arthropods, and when these objects come into contact, dead arthropods almost always lose. Maybe the most curious part about finding a specimen with a disability in a student's collection is the reaction of the student when informed that parts are missing. Often the response is "that was how I found it", as if to indict the specimen itself for having the audacity to be captured without the full complement of structures. Of course, specimens lacking parts are nowhere near as intriguing to me as those possessing extra parts (i.e., the seven legged wonder), especially extra parts glued to the wrong part of the body (i.e., the seven legged antennalegomorph) or better still, glued to the wrong part and not even belonging to the same specimen (i.e., the seven legged, chimaeric antennalegomorph).

Join me next issue when I will once again offer counsel on the finer details of the preservation and mounting of fancy Moth Balls.

Reference

Borror, D.J. and White, R.E. (1970) A field guide to insects, America North of Mexico. Peterson Field Guide Series. Houghton Mifflin Company, Boston, 404 pp.



Henri Goulet

Mayfly (Ephemeroptera)

Gold medal address / Allocution du médaillé d'or

By Richard Ring

Vive la diversité!

I am very honoured and proud to be here today to accept this prestigious award that you have bestowed upon me --- the Gold Medal of the Entomological Society of Canada. I have now joined the panoply of a very distinguished group of Canadian Entomologists! When I first heard about becoming the recipient of the award for 2006, I was watching the finals of the World Cup of Soccer, and, I thought to myself, this must be like the first Canadian soccer player to win the "Golden Ball Award"! (Italy won the World Cup in 2006, but Zinedine Zidane won the "Ball" award for France). I will be referring to this analogy at other points in this address, since I had always wanted to be a professional football player in Scotland during my boyhood days. It was also around this time that I learned that the theme of the Joint Annual Meeting of the Société d'entomologie du Québec and the Entomological Society of Canada in Montréal, Québec, was going to be Diversity. Thus the title of this year's address chose itself as Vive la diversité. I was also pondering at the time the question of why I should have been considered among so many other worthy potential recipients. So I looked up the criteria for the Gold Medal Award, which I found, in essence, encouraged entomologists to become diversified. I believe I qualify, like many others in this audience, but for or the purpose of "diversity" in this talk I will use the term in its widest, personal sense.

Silvan Herberger

Diversity for me has been (in retrospect): (1) In teaching, meeting and learning from new students every year, (2) In research, studying insects and biology in their myriad forms, (3) In travel, meeting new people and traveling to different communities, cultures and countries, and (4) In my personal life, having a diversity of interests in my past, present and, hopefully, future life. Not that this is the be-all and end-all --- sometimes having a more stable and predictable life is more attractive! When I first arrived at UBC in Vancouver in 1964, I could never have dreamt that I would be here today in Montreal accepting this award, and it is for this very reason that I am very reluctant to discuss or talk about "career paths" with students. A career path is something you can only discern from hindsight --- a path with all its twists and turns as well as many blind allays, many of which you may have to quickly back out of! Making the right choice at the right time is critical, assuming, of course, that you have the opportunity and freedom to make such choices.

My first right choice was to choose a future at university rather than in football/soccer. My second right choice was, on graduation from Glasgow University, to go to Canada even though it offered only a 1-year appointment

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Richard A. Ring is Professor Emeritus at the University of Victoria. In 2006, he received the ESC's Gold Medal Award in recognition of his broad legacy to entomology in Canada, particularly in research on the physiology and ecology of arctic insects and biodiversity, and also for his extensive involvement in graduate education and scientific leadership.

as a sabbatical replacement at UBC (for Dr. Geoff Scudder). And my third right choice was to go to the University of Victoria. I was at the time a Post-doctoral Fellow in Ottawa with Dr. Antony Downes, Entomology Research Institute (ERI), Agriculture Canada, Central Experimental Farm, and had just been offered my first big field trip to the Arctic under the aegis of the Northern Insect Survey. However, almost at the same time I received an offer to apply for a faculty position at the new, small University of Victoria in BC. It had been newly established in 1963, although before that it had been a college of McGill University and then UBC for many years. Going to a small, new university on the furthest fringes of the west coast of Canada seemed rather risky business at the time (my old mother in Scotland thought that if you went any further than Western Canada you dropped off the edge of the known world!). However, this move turned out to be the very opposite and, indirectly, led me to this Award today. Here, I had the opportunity to develop the whole undergraduate curriculum in Entomology and, incidentally, Introductory Biology. Here, I could take on my own graduate students and, because of the wide array of very encouraging entomologists at the Pacific Forestry Centre, Agriculture Canada, the Royal BC Museum, and the BC Ministries of Forests, Agriculture, Environment, Parks, etc., did so with their collaborations at both the MSc and PhD levels. So, fortuitously, I had the unexpected freedom to develop the teaching and research programs for the young, developing and enthusiastic minds of university students on the west coast of BC. When I finally got organized at UVic, my first priority was to make up for that lost opportunity at the ERI in Ottawa.

Initially, my Arctic research was in the low western arctic in the regions of Inuvik and Tuktoyaktuk, NWT, mainly because that was where the main sources of logistic support were based (the Inuvik Scientific Research Centre in Inuvik and the Polar Continental Shelf Project (PCSP) in Tuktoyaktuk). My main focus was on the ecophysiology of insects and their adaptations to northern climates and northern habitats dominated by long, cold winters and short growing seasons, often combined with low levels of precipitation. So, it is the combination of cold hardiness, diapause and desiccation resistance that has occupied my research interests for a long time. The diversity of arctic insects, however, has also been a part of my research agenda, in accordance with the focus of the Northern Insect Survey. My first PhD student, Lee Humble, studied the diversity of willow gall-forming sawflies (Tenthredinidae) and their parasitoids, and determined that their abilities to survive low winter temperatures and desiccation stress in their hibernacula were co-adapted, that is, they were overlapping adaptations. Neville Winchester (MSc candidate) went on to examine the diversity and cold tolerance of arctic trichopteran larvae on the Tuktoyaktuk Peninsula, while Tim Boulton (Honours student) collected and identified a diversity of aphids in the same general area. In1990, I was introduced to the high eastern arctic by a Post-doctoral Fellow working with me at the time, Dr. Olga Kukal. This coincided with the closing-down of the PCSP base in Tuk, leaving only PCSP, Resolute, as the main source of logistic support for northern researchers. Thus the remainder of my arctic career took place out of Resolute. Accessible by Twin Otter from Resolute is the remarkable arctic oasis, Alexandra Fiord, about halfway up the east

Richard Ring

Field Station (RCMP outpost) at Alexandra Fiord with scientists flying the flag

coast of Ellesmere Island, Nunavut. Olga had been working there for several years and had become renowned for her work on the biology and cold hardiness of the arctic woolly bear, *Gynaephora groenlandica* (Lymantriidae). Also established that year was the Canadian component of the ITEX Program (International Tundra Experiment), directed by Dr. Greg Henry, a plant ecologist from UBC. So this afforded another research opportunity, the ability to become involved in global warming scenarios with insects, using the Open Top Chambers (OTCs) already established there by Greg and his co-workers. The Northern Insect Survey had already established a baseline study for the diversity of arthropods in the nearby (relatively speaking!) Lake Hazen area on Ellesmere Island, so a comparative study was undertaken at Alexandra Fiord. Over the last 15 years or so, valuable information has been collected and analyzed by Olga Kukal and myself on insect ecophysiology, by myself, Dean Morewood (PhD candidate), Adrian DeBruyn (MSc candidate) and Jeff Lemieux (Honours student) on insect ecology and diversity, and by myself, Dean Morewood and Greg Henry on insect and mite diversity and abundance within and without the OTCs. This will provide the baseline information for interpreting changes in invertebrate faunal composition and abundance within the context of global warming in the arctic. My arctic research experience has led to some unique and diverse opportunities, such as being invited to international symposia on insect cold tolerance throughout the world, being asked to organize such symposia, and being invited to participate in the "Circumpolar Ecosystems in Winter" workshop in Churchill, Manitoba in March 1994. This is the coldest I have ever been in my life, with an air temperature of – 40 °C coupled with a wind-chill factor of – 56 °C! However, we did get taught how to construct our own igloos. Perhaps the most interesting invitation, however, was the offer to accompany an invertebrate group of biologists from the British Antarctic Survey in Cambridge, England, to the sub-antarctic island of South Georgia. Lead by Dr. Bill Block, BAS, five of us spent three months studying the feeding behaviour and ecophysiology of four species of insects and one species of spider --- a large proportion of the terrestrial arthropod fauna of the Island. South Georgia is, of course, the burial place of Sir Ernest Shackleton, arguably one of the greatest Antarctic explorers and heroes of all time. We made a special journey to pay homage at his shrine, his final resting place at Grytviken, SG.

Perhaps I had had enough of cold weather when, in 1990, I had an invitation from

Richard Ring

Richard Ring

Sir Ernest Shackleton's memorial cairn (left) and grave (right) on South Georgia Island.

the Western Canada Wilderness Committee (WCWC) to join Neville Winchester (PhD candidate) in a study of insect diversity in the high canopy of an old-growth temperate rain- forest in the Upper Carmanah Valley on the west coast of Southern Vancouver Island (in other words, in our own back yard). The WCWC had built the canopy access system on the assumption that the scientists would follow, and we did! At the time, funding for arctic research was dwindling and, it seemed to us, funding for diversity studies was increasing. The rest is history. By the time Neville had completed his PhD in the canopy and forest floor of the old, giant Sitka spruce trees in the Carmanah Valley, he had collected 3.5 million specimens and identified 1311 species, at least 120 of which were new to science. In the meantime, Zoë Lindo, PhD candidate, has examined over 50,000 specimens of oribatid mites representing 138 species from the canopy and forest floor of ancient western red cedar trees in the Walbran Valley after only two years into her PhD program. Neville has now established

Zoë Lindo

Neville Winchester ascending a western red cedar in the Walbran Valley, BC)

an international reputation for himself in canopy studies in both temperate and tropical rainforests, and I have certainly benefited from my association with him. Such benefits have included diverse experiences in teaching and research, such as (1) helping to establish the first terrestrial-based course at Bamfield Marine Biology Station in BC, called "Temperate Rainforest Ecology", (2) contribute to a Tropical Rainforest Ecology field course at the canopy crane site in Northern Australia, near Cape Tribulation in Queensland, and (3) spend a large part of a sabbatical leave at the Canopy Research Unit, Department of Plant Sciences, University of Yaounde, Cameroon.

As a university professor, my other major source of diversity in life is in the experience of teaching. If you look at my curriculum vitae, you will see that I appear to have taught the same four undergraduate courses for the whole of my career (three in Entomology and Introductory Biology). However, this fails to recognize all those "guest lectures" as well as Directed Studies students and Honours students. Indeed, someone (not me) has calculated that over 16,000 students have taken my courses at UVic! Also not apparent in my teaching dossier, is the fact that, in teaching you meet new students every year with varied cultures, backgrounds, interests and expectations. Without doubt, I can say that teaching at the university level has been the most enjoyable and fulfilling achievement of my career. Perhaps this enthusiasm for teaching is reflected best in my award of the "UVic Faculty of Science Teaching Award" in 2003. My contribution to undergraduate teaching has not been restricted to my own courses, and I have spent considerable time and a leading role in getting the "Biology Cooperative Education Program" underway in the Biology Department. Furthermore, I have volunteered freely on numerous occasions to speak on entomology and ecology to school students (from kindergarten to high school), to community groups and societies, and to the local media. Another aspect of the "two-way street" of the teaching experience, is

the long-term consequences of your teaching interactions. For instance, when your first-year student in Introductory Biology turns up as the orthopedic surgeon for your hip joint replacement! The moral of this tale is "always be nice to your students". I received an A grade surgical operation and, when I looked back, I had given him an A in Biology 150! Another consequence of this type in teaching was when I was invited to give campfire talks on insects and ecology during two river-rafting trips in Northern BC by former students who had established their own river rafting company, "The River League". The first was down the Tuchodi River and Lakes system on the north-eastern slopes of the Rockies near Nelson, BC, and the second was down the Taku River from BC into Alaska, in northwest BC. The latter was in the company of Wade Davis, the only Canadian to be Scientist-in-Residence of the National Geographic Society.

Another former student, who is now with the Canadian Cost Guard, actually hired me to do a survey of some insect problems in some of the Light Stations on the west coast of Vancouver Island and the mainland. This involved a two-day trip flying by helicopter to several Light Stations along the coast, collecting the insects involved, analyzing the results, writing a report, and getting paid for it! Along the way, I flew up the world-famous West Coast Trail on the mid-coast of western Vancouver Island. I did it in 30 minutes, compared to the normal 5 or 6 days. One of the most bizarre teaching assignments I ever had was the establishment of our Biology 150 course into the BC Penitentiary System with my colleague, Dr. Tom Mace, in 1978. It was called the "Correctional Education Program", and allowed "qualified" inmates to register for this accredited UVic course as adult or mature students. It was given in the first year at Matsqui (a medium security prison in Abbotsford) with an enrolment of 11 students, and then again at the BC Pen in New Westminster (a high security prison). In 1979 the PC Pen was moved to Agassiz, and the whole program was moved to Simon Fraser University. Still, Tom Mace was hired to teach the course for another two years at William Head Prison on southern Vancouver Island. The whole program died out in the late 1980s, but I don't know why.

So, Canada and the University of Victoria have been good to me. When I looked up the meaning of "good" in the Oxford English Reference Dictionary (1996), it supplied about 60 phrases bearing the context of the word good. I don't think phrase #13 was appropriate "… he is attractive, and has good looks and good legs", but I do think #16 is on the mark "… a desirable end objective, a thing worth attaining". You know you have finally made good (as a non-taxonomist) when you have a new species of insect named after you --- in my case, it is Atheta ringii (Coleoptera: Staphylinidae) , a beautiful little rove beetle collected in the Carmanah rainforest by Neville Winchester and named by Jan Klimaszewski. Thank you, my colleagues.

In summary, especially to the students in the audience, BECOME an ENTOMOLOGIST and SEE the WORLD. It may be also somewhat re-assuring that, if you do, you may even have more time to enjoy it. The actuarial tables (as referenced in Carl Swanson's first year biology textbook, "The Natural History of Man", 2nd Edition), indicate that Entomologists have the greatest longevity of any professional group exceeded only by Conductors of Classical Music. Chemists, physicists, mathematicians, geographers, doctors, dentists, engineers, architects etc., etc. are away down the list, with Reigning Monarchs of Europe at the bottom (not that I thought that monarchs were much of a profession!). This is confirmed by the list of the ages of current members of the Entomological Society of Canada (see Ed Becker, "Newsletter for Senior Entomologists" February 2005). Entomologists in Canada aged 80-85 years = 22; from 86-90 years = 13; from 91-95 years = 10; and from 96-102 = 7. This is complicated by the fact that there are 43 couples of entomologists (either one or both) who have been married for 50-65 years. Perhaps it is marriage that increases your longevity (we already know from other sources

that married men live longer (and happier!?) than single men). So hedge your bets: become an entomologist AND get married.

Finally, I wish to end by mis-quoting another guy with a big nose --- Vive la Canada libre, Vive la diversité, et Vive la difference!

Merci, Mesdames et Monsieurs.

Meeting announcements / Réunions futures

North American Forensic Entomology Association's 5th Annual Conference
Simon Fraser University, Vancouver, British Columbia, Canada, 11-13 July 2007
www.nafea.net

92nd Annual Meeting of the Ecological Society of America and the Society for Ecological Restoration International
San Jose, California, USA, 5-10 August 2007
http://www.esa.org

Annual Meeting of the American Arachnological Society
Susquehanna University, Selinsgrove, Pennsylvania, 13-17 July 2007
http://www.americanarachnology.org/

Annual Meeting of the Dragonfly Society of America
Springerville, Arizona, USA, 27-30 July 2007
http://www.odonatacentral.com

17th International Congress of Arachnology (ISA)
São Pedro, São Paulo, 5-10 August 2007
http://www.ib.usp.br/~ricrocha/ISA17/ISA17.htm

40th Annual Meeting of the Society for Invertebrate Pathology and the 1st International Forum on Entomopathogenic Nematodes and Symbiotic Bacteria
Université Laval, Quebec City, Quebec, Canada 12-16 August 2007
http://www.sipweb.org/

Joint Meeting of the Entomological Society of Canada and the Entomological Society of Saskatchewan
Saskatoon, Saskatchewan, Canada, 30 September - 3 October 2007
http://www.sfn.saskatoon.sk.ca/science/ess/ESS-ESC/intro.html

Insect Rearing Workshop
Mississippi State University, Starkville, Mississippi, 21-26 October 2007
http://www.msstate.edu/Entomology/resources/Rearingwksp.html

"Biocontrol Without Borders", Collaborative Symposium of the International Organization for Biological Control Nearctic Regional Section & the Neotropical Regional Section & the Mexican Society for Biological Control
Merida, Yucatan, Mexico, 13-15 2007
http://entomology.uark.edu/iobcsymp.html

55th Annual Meeting of the Entomological Society of America
San Diego, California, USA, 9-12 December 2007
http://www.entsoc.org/annual_meeting/current_meeting/index.htm

XXIII International Congress of Entomology
Durban, South Africa, 6-12 July 2008
www.ice2008.org.za

Making a great poster

Presenting a poster at a conference is one of the three main ways, besides publishing papers and giving talks, to communicate your science. Doing a great poster instead of just an OK poster can increase your audience (potentially broader than if you were giving a talk) and provide valuable feedback. In addition, it can allow you to refine your methods and hypotheses, and even establish new collaborations. And just think how winning a "Best Poster Prize" will enhance your CV and your ego. Doing a great poster doesn't necessarily take more time, but it requires careful planning.

One of us was a judge for the student poster competition at the last annual meeting of the Entomological Society of Canada in Montreal. Although overall the posters were good, we thought that some guidelines could make many posters more effective. We have made only a few posters ourselves, with variable success (one of us won a student competition prize a few years ago). Having natural artistic and communication skills are advantages, but even without those, you should be able to prepare at the least a decent poster if you follow a few rules.

Many researchers pay little attention to posters during conferences. This is in part because attending talks can be tiring. Therefore, posters should be designed for tired meeting attendees! In that case, an effective poster must be attractive, and persuade people to stop and to stay longer than the usual 10 seconds. It must be simple and rapidly understood; and have a take-home message that people will easily remember.

Frédéric Beaulieu is a research scientist with Agriculture and Agri-Food Canada, in Ottawa. He can be contacted via email at: beaulieufr@agr.gc.ca.

Judith Myers is a professor in the Department of Zoology and Faculty of Land and Food Systems at the University of British Columbia. She can be contacted via email at: myers@zoology.ubc.ca.

Attractive, eye-catching

The following aspects will help people come closer and stay longer:

- a short, simple, punchy title
- harmonious, highly contrasting colours
- striking images
- simple, tidy layout

The title may be the single most important component of your poster. It must be straightforward and must clearly define your topic. It should be short, preferably on one line. If possible, it should convey your take-home message. If your title has style or peaks curiosity, it could also capture the attention of someone only remotely interested in your field. Don't be too clever with the title. Wordplays should be used cautiously as they may leave the viewer with little idea of what the study is about. A title made of a question has some appeal because it forces the viewer to seek the answer. Other good titles are 'answers' or statements. In brief, the title has two roles: attract readers, and provide a message.

Don't pick random colours. Would you do that if you were painting your apartment? Text laid on a coloured background can be more attractive than black text on a white background, but be careful. The background should be a single colour and can be either dark or pale. To be highly legible, text must contrast strongly with the background. Never put colours of competing luminosity next to each other. For example, while red on blue can look good on the computer screen it doesn't work for distant viewing. The background should not distract from the actual data. Text and graphs on white backgrounds have the advantage of leaving all the prominence to the actual data. A trick to increase contrast between an element and the

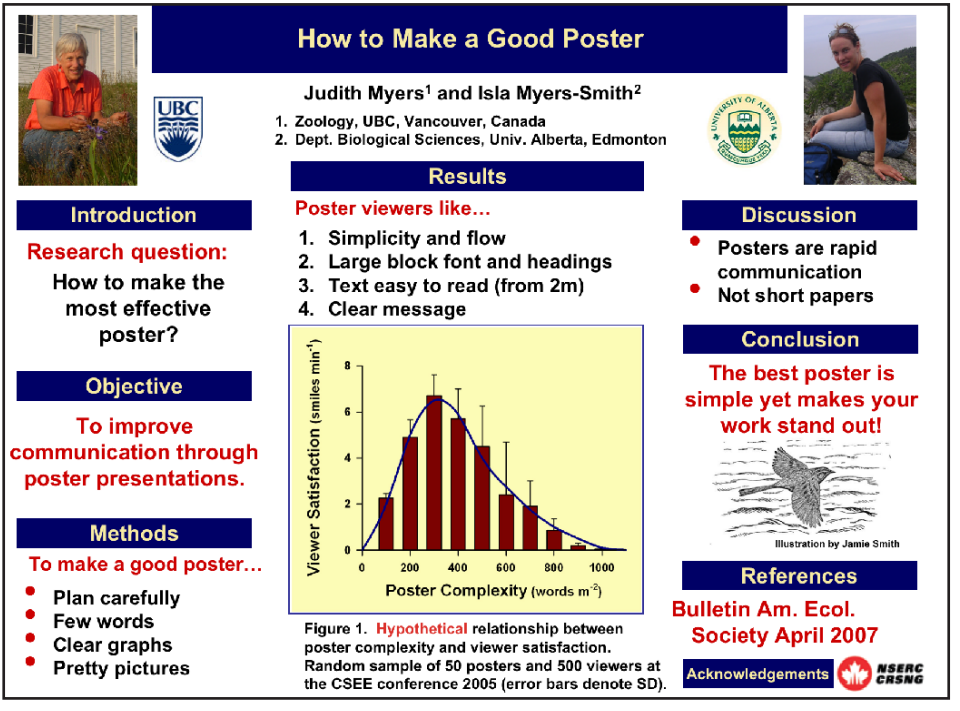

Figure 1. A sample outlining the qualities of a great poster. Adapted Ecology 101, Tips for effective communication in Ecology. Bulletin of the Ecological Society of America, April 2007.

surroundings is to add a contrasting border around it or to put it in a coloured box.

Images on a poster are a bit like the furniture inside an apartment. If you're looking for an all-furnished apartment, and one is nicely furnished, you will consider renting it. A poster with stunning images of meaningful content will entice viewers. Effective images are sharp, nicely contrasted to the surroundings, and, not the least, convey information. Useful images can represent your study taxon, the habitats to be conserved, the methods, or your results. Use images on posters but never as a background for your poster.

Finally, attractive posters tend to have a simple, tidy layout, with good proportions of text, images, and blank space (Figure 1). A poster overloaded with text or cluttered with a multitude of small images will deter readers. This is subjective, but a ratio of ¼ - ½ text, ¼ - ½ images (including photos, figures and tables), and ¼ blank space is a good general rule. Space bordering the poster and between paragraphs and images allow readers to digest information before passing to the next block of data. **Large blocks of continuous text can immediately repel readers.**

Simple and straightforward

Step one – check the size and shape requirements for poster presentations for the meeting you are attending. This means you don't have to do a total reorganization at the end.

Step two – you should construct your poster

so that essential information can be assimilated within a few minutes. A poster is simple and straightforward if it has not too much information, and is well organized and tidy. Such a poster has:

- limited text (ideally <500 words)
- large font size
- well-defined sections with short headings
- a clear flow among sections
- a few simple tables and images

Little text with big font is the key. A font size of 28-40 should make the main text readable from 2 m. Your title should be around 100-120 to be readable from 5-6 m. Subheadings should be of intermediate size. Don't use capital letters as this is more difficult to read than lower case words. Text in figures and tables can have smaller font than main text, but should be a minimum of 14. Choose a font style that is highly legible, especially for the main text. Arial and Comic Sans MS are among the most legible styles because they are sans-serif (without 'serifs' or decorative features at the end of strokes) and they have thick strokes.

Organize your poster into clearly divided but logically connected sections. Use simple headings, boxes, arrows, and outstanding colours to draw your readers through them. Sections should first be divided vertically, and then horizontally, to prevent people from moving left and right too often. Each section should carry a single main idea. Point format (bulleted text) is more rapid to understand than normal text. **Complete sentences are not necessary**. Use short, simple, non-jargon words so that even readers not familiar to your field can understand. If you really have to use technical terms, then briefly define them in parentheses or in a small glossary at the end. Go through at the end and look for unnecessary words.

When deciding whether text or image should be used for a given section, choose the method that most clearly and rapidly gives the story. Remember that an image is worth a thousand words. **Eliminate everything that is superfluous!** People really interested in your research will seek you anyway for discussion of details.

Use common sense. Always ask yourself: is this the best way I can present and explain my research? Is this word, sentence or section really necessary? Is the poster straightforward enough so that viewers can easily grasp my take-home message?

A take-home message

A poster that has a clear take-home message will have a much stronger impact and will make people remember something about your poster, instead of being just 'another nice poster'. Your take-home message can be 1-3 key points that you want your readers to remember. Everything in your poster should be structured to emphasize your take-home message. Ideally, a reader should see your take-home message from your title, figures, or conclusion alone. If you're not sure what is your take-home message, ask yourself: 'if people could remember only one thing about my poster, what would I want it to be?'

More on the content

A research poster should include:

- An introduction, providing the context of your study, why it is important, and your objectives or questions.
- The methods used. This section should be highly condensed and limited to sufficient details for the readers to understand how your study was done, and to see whether your design was adequate to test your hypotheses. If your method can be more rapidly grasped using a photo or diagram of your design, use one.
- Your findings. They should be clear and straightforward. Generally, figures and tables are self-explanatory and supported by little text. Figures should have an informative, concise caption, and possibly additional text or arrows to identify items or draw attention. Don't overcrowd your figures or tables so that people get confused or deterred by it.
- A discussion or conclusion. Here you should interpret your results and discuss their implications to put your study in a broader perspective. What do your findings all mean?

What does it add to previous knowledge in the field? What is your take-home message? You can briefly state whether your findings support or contradict other studies, and mention any limitation that your study has. But remember – this is not a paper. Be concise and give the main points.

• Authors, affiliations, acknowledgements, references. People are likely to ask you questions. Therefore it is nice to have complete first names on the poster and a small picture of yourself. Limit references to the few most significant ones. You should acknowledge people or institutions that made significant contribution to the study or the poster, including those that provided financial assistance. Adding your contact information such as email address is useful. An abstract on your poster is not necessary because your poster is already a 'summary' of your study.

It is not imperative that your poster have clear-cut sections as defined above. An alternative is to present your study as if you were telling a 'story'. As long as the critical elements (context, problem, etc.) are all treated logically in your poster and are easy to follow, any reader (and judge!) with common sense should appreciate your poster. Also, it is not imperative that you have results. A poster showing a research proposal or preliminary results can be satisfying to readers.

Catastrophe prevention and in the heat of the session

Prepare your poster several days or weeks ahead of the conference. This will allow you to: 1) get people's opinion on your poster before final print, 2) find a business that have the paper quality and size you want, 3) avoid getting caught at the end of a line-up, and 4) avoid unnecessary stress related to a possible disaster (not having any poster ready for the conference!). Carry your poster with you in a protective tube – don't check it in – and keep a copy in your memory stick in case you lose it and need to print it again, to avoid further catastrophe.

Finally, you should not overlook your role during the poster session. Your active presence will help you connect with people. Stay around your poster at least during the allocated time for the poster session, and seize occasions to discuss with people that show extra interest. Some people are happy for you to walk them through your poster. Be prepared to summarize your poster clearly and concisely – why your study was important, how you did it, what you found, and what does it mean – within a minute or so. Carrying business cards, handouts copies of your poster, or reprints of your own published papers can be helpful. A great poster accompanied by a friendly, interested presenter, can bring fruitful conversations and impress. In turn, that can lead to collaboration offers or even job opportunities.

Byron Lee

Ladybird beetle on backside of leaf

The student wing / L'aile étudiante

Mike Borkent

Chris Borkent

Hi Everyone.

Hope you are all having a great summer in the field/lab with your favourite beasties. In the midst of summer busy-ness don't forget to register and submit your abstract for the ESC-ESS meetings coming up in Saskatoon at the end of September. We are looking forward to seeing you all there!

Jessica Smith

Greg Smith

Are you planning on presenting a poster at the meetings? In addition to the 'Tricks of the Trade' article (pp. 64-67), you should check out the website sent to us by Jen Perry (U of T): http://www.biology.lsa.umich.edu/research/labs/ktosney/file/PostersHome.html This website gives a good summary of what should, and should not, be included to produce a prize winning poster (and who wouldn't want the extra cash from a President's prize?). If anyone else out there has any recommendations to help out your fellow grad students don't hesitate to send them to Greg (grsmith@pfc.cfs.nrcan.gc.ca) or Chris (chris.borkent@mail.mcgill.ca).

This year we will again be holding a silent auction during the ESC meetings to help raise extra funds for ESC graduate scholarships. If you or someone you know is cleaning out their office and getting rid of entomology related books or items, please grab them and bring them along for the auction. We can always do with more money for entomology scholarships.

Have a great summer and see you all in Saskatoon!

Chris and Greg

Student Conference Travel Awards 2007

The Student Conference Travel Award is a cash award for students to travel to the Joint Annual Meeting to present a paper or poster. This year the meeting will be held in Saskatoon 30 September to 3 October, 2007. The competition for the ESC Student Conference Travel Award(s) is open to students with active membership in the ESC (i.e., paid for the current year), who are either in a graduate or undergraduate program at a Canadian university. The details for applying are available on the Society's website (http://esc-sec.org) under the student affairs section. The application will include an abstract of the paper or poster to be given at the Joint Annual Meeting. This may exceed the meeting's stipulated abstract word limit, but must not exceed 250 words in length. (Note: an official abstract fulfilling the requirements of the paper or poster presentation still needs to be submitted separately to the Organizing Committee of the Joint Annual Meeting). Completed applications should be sent to Judith Myers, Dept. Zoology, University of British Columbia, 6270 University Blvd. Vancouver V6T 1Z4. Deadline for applications is 29 June, which is the same date as that for the submission of abstracts for the meeting.

Judy Myers,
Chair Scholarship Committee

Entomological Society of Canada Graduate Student Symposium 2007: Call for Submissions

A Graduate Student Symposium will take place this year in Saskatoon, Saskatchewan, during the Joint Annual Meeting of the Entomological Society of Canada and the Entomological Society of Saskatchewan, September 29th - October 3rd 2007. The symposium is currently scheduled for the afternoon of Tuesday the 2nd of October.

The principal goal of the symposium is to give a higher profile to graduating students as they move to the next stage in their careers by providing them a longer time slot to talk about their research.

To be eligible, students must have either defended their thesis in the past year or be planning to defend within 1 year of the meeting. The degree may be either MSc or PhD.

Students from all disciplines are encouraged to submit an abstract. Ideally, the symposium will follow the general theme of the meeting, "Insects: Microscale Subjects for Megascale Research". However, depending on the submissions, a different focus may be selected.

- 4-6 presentations will be selected depending on the amount of time allotted to the symposium.

- presentations will be approx 25 minutes in length with an additional 5 minutes for questions (30 minutes total).

- papers that are included in the Graduate Student Symposium will not be eligible for the Presidents Prize. However speakers may also submit a paper on a more specific topic to the President's Prize competition.

If you are eligible and want to be considered for the symposium please submit the following information **by 15 June 2007:**

1. **An expanded abstract** (200-300 words) describing your proposed presentation and briefly how it relates to the theme of the meeting "Insects: Microscale Subjects for Megascale Research".

2. **A letter (or email) of support** from your principal supervisor that confirms the anticipated or actual date of graduation, and comments on your proposed presentation.

Students who have been selected to speak will be contacted by 31 July 2007. When notified, they will receive a list of the other speakers, email addresses and a copy of all initial abstracts to identify point for discussion in the talks and elimination of potential overlap.

Expanded abstracts of chosen speakers will be published in the December issue of the *Bulletin of the Entomological Society of Canada*.

Submission for the graduate student symposium should be sent in Word or Rich Text format to: Chris Borkent (chris.borkent@mail.mcgill.ca) or Greg Smith (grsmith@pfc.cfs.nrcan.gc.ca).

Henri Goulet

Cosmopteryx gemmiferrela (Lepidoptera: Cosmopterygidae)

Symposium des étudiants gradués de la Société d'Entomologie du Canada 2007: Invitation générale

Un Symposium des étudiants gradués est organisé à l'occasion de la réunion annuelle conjointe de la Société d'Entomologie du Canada et de la Société d'Entomologie de Saskatchewan qui aura lieu à Saskatoon, Saskatchewan, du 29 septembre au 3 octobre 2007. Le symposium est actuellement prévu pour l'après-midi du mardi 2 octobre.

L'objectif principal de ce symposium est de mettre en lumière les travaux de recherche des étudiants gradués alors qu'ils passent à la prochaine étape de leur carrière en leur fournissant une période plus longue afin de présenter leurs recherches.

Pour être admissibles, les étudiants doivent avoir soutenu leur thèse au cours de la dernière année, ou planifier de le faire dans l'année suivant la réunion. Les étudiants à la maîtrise et au doctorat sont admissibles.

Les étudiants de toutes les disciplines sont encouragés à soumettre un résumé. Idéalement, le Symposium devrait correspondre au thème général de la réunion, soit "Les insectes : petits sujets pour de grandes recherches". Toutefois, selon les sujets proposés, il sera possible de lui donner une orientation différente.

- 4 à 6 présentations seront sélectionnées en fonction du temps alloué pour le Symposium.

- Les présentations seront approximativement de 25 minutes avec une période additionnelle de questions de 5 minutes pour un total de 30 minutes.

- Les présentations incluses dans le Symposium des étudiants gradués ne seront pas admissibles au Prix du président. Cependant, les conférenciers peuvent également soumettre un résumé sur un sujet plus précis afin de participer au Prix du président.

Si vous êtes admissible et souhaitez être considéré pour le Symposium, veuillez nous faire parvenir les informations suivantes au **plus tard le 15 juin 2007:**

1. **Un résumé détaillé** (200-300 mots) décrivant la présentation proposée et faisant le lien entre le sujet de l'exposé et le thème de la réunion " Les insectes : petits sujets pour de grandes recherches ".

2. **Une lettre (ou courrier électronique) d'appui** de votre directeur de thèse confirmant votre date prévue ou réelle de graduation, et commentant la présentation proposée.

Les étudiants dont l'exposé sera sélectionné seront contactés au plus tard le 31 juillet 2007. Ils recevront alors la liste des autres conférenciers du Symposium avec leur adresse électronique ainsi qu'une copie de leur résumé initial afin de se préparer aux discussions et d'éviter les chevauchements éventuels.

Les résumés détaillés des conférenciers seront publiés dans le numéro de décembre du *Bulletin de la Société d'Entomologie du Canada*.

Les soumissions pour le Symposium des étudiants gradués doivent être envoyées en format Word ou Rich Text à Chris Borkent (chris.borkent@mail.mcgill.ca) ou Greg Smith (grsmith@pfc.cfs.nrcan.gc.ca).

Kevin Floate

A bevy of beeflies (Diptera: Bombyliidae)

Seeking Graduate Students

Département de biologie, Université Laval, Québec Canada.

We are looking for a PhD candidate to study insect diversity and abundance in relation to disturbances caused by deer over browsing on Anticosti Island, Gulf of St-Lawrence, Quebec Canada. The overall objective is to characterize the recovery of forest communities from deer over browsing using experimental control of deer abundance. Major guilds of insects (herbivores, pollinators, ground and foliage hunting predators, and insect decomposers) will be characterized, over a range of controlled experimental levels of deer abundance in large enclosures. The study provides the opportunity to elucidate links between insect diversity, ecosystem integrity and forest productivity, in boreal forests through post disturbance experimental manipulation of deer abundance. From a practical viewpoint, knowing how insect diversity and abundance react to vegetation recovery with deer control should help to predict which deer densities are compatible with ecological stability, and to examine the potential for ecological restoration of this large forested island ecosystem. The project will be part of the research program of the NSERC Industrial Research Chair-Produits Forestiers Anticosti, with a stipend available as financial support to the candidate and depending on merit.

Conrad Cloutier
(418) 656 3183,
Conrad.Cloutier@bio.ulaval.ca

Christian Hébert
(418) 648 5896,
chhebert@rncan.gc.ca

Memorial University

Graduate student position available in plant-insect interactions. The project focuses on understanding the mechanisms behind which plants attract insects by examining the ecology and evolution of spore dispersal by flies in Splachnaceae mosses. See http://www.mun.ca/biology/pmarino/PMarino_bryophyte_research.php for more detailed information on the research project.

Paul Marino
(709) 737-7497, pmarino@mun.ca

Lethbridge Research Centre

The Insect Pest Management at the Lethbridge Research Centre (Agriculture and Agri-Food Canada) is looking for a graduate student, maybe two, to conduct research to integrate biological and cultural control strategies to manage the wheat stem sawfly (*Cephus cinctus*). The second student would work on development of economic injury levels and chemical management for the pea leaf weevil (*Sitona lineatus*) in field peas. For more information, please email Héctor Cárcamo at carcamoh@agr.gc.ca.

MSc Graduate Position in Insect Biodiversity Available Ecology & Conservation Biology of Insects

Are you interested in insect taxonomy, and in carrying out research that uses insect communities to detect effects of human disturbance? Would you enjoy field work in Kananaskis Country, in the front range of Alberta's Rocky Mountains?

If yes, and if you're interesting in beginning work on MSc research that considers distance-based detection of ecological impacts in the fall or winter of 2007 (with a possible start on field work in summer 2007), please contact:

Dr. Ralph Cartar
Department of Biological Sciences,
University of Calgary,
Calgary, Alberta. T2N 1N4
Email: cartar@ucalgary.ca
Phone: (403) 220 3640

Bourse pour assister à la réunion annuelle 2007

La bourse pour assister à la réunion annuelle est un prix en argent afin de permettre aux étudiants d'aller présenter une communication orale ou une affiche à la réunion annuelle. Cette année, la réunion aura lieu à Saskatoon, du 30 septembre au 3 octobre 2007. La compétition pour la bourse pour assister à la réunion annuelle de la SEC est ouverte aux étudiants membres de la SEC (i.e. ayant payé pour l'année en cours), inscrit à un programme de premier cycle ou aux études graduées dans une université canadienne. Tous les détails sont disponibles sur le site de la société (http://esc-sec.org), sous la rubrique « Affaires étudiantes ». Les applications doivent inclure un résumé de la communication qui sera présentée à la réunion conjointe annuelle. Ce dernier peut dépasser la longueur accordée pour le résumé de la réunion, mais ne doit pas dépasser 250 mots. (À noter : un résumé respectant les conditions d'une communication doit tout de même être soumis séparément au comité organisateur de la réunion conjointe annuelle). Les mises en candidature doivent être envoyées à Judith Myers, Dept. Zoology, University of British Columbia, 6270 University Blvd. Vancouver V6T 1Z4. La date limite pour l'application est le 29 juin, soit la même date que pour la soumission des résumés pour la réunion annuelle.

Judy Myers,
présidente du comité des prix aux étudiants

Student Awards: 2007 winners

Congratulations to the successful recipients of the 2007 Entomological Society of Canada student awards. The winners and their projects are as follows:

Graduate Research-Travel Scholarship: This year's award went to MSc student, Yan Boulanger (Université de Quebec à Rimouski) for travel to Finland to work with Jari Kouki on large-scale field experiments in boreal forest research.

Postgraduate Scholarships: The PhD award went to Jennifer Perry (University of Toronto), who is studying sexual conflict and cooperation in post-copulatory interactions in ladybird beetles. The MSc award was presented to Marla Schwarzfeld (University of Alberta), who is studying the diversity of wasp parasitoids in a boreal forest ecosystem.

John Borden Scholarship in IPM: This year's scholarship was awarded to Lisa Conroy (MSc student, University of Guelph), who is studying IPM for insecticide tolerant strains of the American serpentine leafminer.

Keith Kevan Award: this year's scholarship was awarded to Tonya Mousseau (PhD student, University of Calgary) who is studying historical patterns of diversity of carrion beetles along the Wallace's line, one of the most geologically complex areas of the world.

The deadline for the Student Conference Travel Awards is **29 June 2007**.

See http://esc-sec.org/students.htm for complete award details, or contact the Chair of the ESC Student Awards Committee, Judith Myers (Dept. Zoology, University of British Columbia, 6270 University Blvd. Vancouver, B.C. V6T 1Z4, myers@zoology.ubc.ca).

Colony Collapse Disorder (CCD) in Canada: Do we have a problem?

Peter G. Kevan, Ernesto Guzman, Alison Skinner, and Dennis van Englesdorp

Colony Collapse Disorder (also known by several other names) has become a plague in throughout the United States. Major losses in colonies have been reported from all states that have reported (http://maarec.cas.psu.edu) as of 26 February 2007. In Canada, where winter losses are commonly problematic, no instances of CCD have been confirmed, at least so far. But, very recent reports are of suspicious losses having been experienced in Ontario and Saskatchewan. Should Canadian beekeepers be concerned? Does Canadian beekeeping provide insights into CCD?

Let's first look at the information that the CCD Working Group in the USA has provided (http://maarec.cas.psu.edu).

The symptoms of a CCD collapsed colony are no adult bees and no corpses, presence of capped brood, presence of both honey and pollen (bee-bread) stores. A collapsing colony shows too small a workforce for colony maintenance and that workforce is made up of young bees, and the bee cluster seems reluctant to feed on either stored honey or pollen. One of the most peculiar of symptoms is the lack of robbing behaviour of surviving colonies of colonies that have died out. What is going on? Strange symptoms indeed!

The CCD Working Group concludes that "stress" is a major contributor to the condition, and they itemize a number of stresses that are likely involved. In particular, they mention that migratory beekeeping practices are stressful to the bees. The reasons suggested are confinement and temperature fluctuations during transport. Certainly, added to those reasons are the mechanical vibrations and shocks that colonies on trucks experience, which, when protracted over several days' duration would be upsetting to the bees. Confinement itself would cause the air within the hives to become stale, with higher than usual levels of Carbon dioxide (CO_2) and moisture. Even moving colonies short distances for pollination or honey production is well known to cause the bees to become upset, so moves taking days and over thousands of kilometres would be expected to be stressful on the bees, as well as on the beekeepers.

Rapid movement of colonies of bees across the USA may cause "jet-lag". Yes, bees do sleep and do have regular daily rhythms of activity (just as do people) (Kaiser 1988; Sauer et al. 2003, 2004; Zhang et al. 2006), so one can suggest that a colony of bees being whipped across two or three time zones in a quick move would be subject to some stress.

Migratory beekeeping involves the packing of large numbers of colonies onto the backs of trucks. There, the colonies are un-naturally close together. The CCD Working Group acknowledges that when the bees cluster on the outsides of hives packed as truckloads, mingling of bees between the hives would occur. The bees' defecation on the outside of the hives would increase rates of transmission of pathogens.

This article originally appeared in Hivelights *20 (2): 18-20. It is reprinted here for the interest of our readers.* Hivelights *is the quarterly magazine of the Canadian Honey Council.*

Peter Kevan and Ernest Guzman are research scientists at the Department of Environmental Biology, University of Guelph, Guelph, Ont. Alison Skinner is a Technology Transfer Specialist, employed by the Ontario Beekeepers' Association, Guelph, ON. Dennis van Englesdorp is the Acting State Apiarist for the Pennsylvania Department of Agriculture, Harrisburg, PA, USA.

That transport in and of itself causes colony death and the CCD Working Group reports that 10% to 30% losses are "not uncommon" as a result of moving colonies for pollination. With such losses, migratory beekeepers make splits to compensate for the losses. The Working Group notes that the reuse of equipment from hives that have died out is part of the transfer of diseases and chemical contaminants and may contribute to the problem. They also point out that making splits changes the age structure of the colonies being split, and results in an un-natural age structure of bees in the split itself. Thus, the ratio of young, nurse workers to older foragers becomes imbalanced, further stressing the colonies.

Although migratory beekeepers seem to have suffered badly, reports of CCD are not confined to their operations.

Other stresses noted by the CCD Working Group are overcrowded apiaries, nutritional stress, drought and contaminated water, use of antibiotics and chemical pesticides (within and outside the hive) and, of course, mite parasitosis.

Overcrowded apiaries are commonly part of migratory beekeeping, especially for pollination services. The "staging apiaries" where hundreds of hives are placed cheek-by-jowl are not healthy for the bees. Often there is not enough food within the flight ranges of the foragers, robbing is commonplace (and would lead to disease transmission), and hives weaken despite the efforts of the beekeepers to provide food (pollen or pollen substitute and syrup).

Nutritional stress is not really addressed by the Working Group, but several points are worth mentioning. Honeybee colonies used for pollination services on large monocultures, such as almonds, blueberries, alfalfa are placed in environments where little or no food choice is available to them. It is known that a diverse diet of a mixture of pollens from different plant sources is beneficial to bees, and the same would be true for nectar (Schmidt et al. 1987, 1995). Thus, nutritional imbalance could explain, in part, some of the observed symptoms. Moreover, the situation for almonds is complicated by the potential toxicity of pollen and nectar from almond flowers (Kevan and Ebert 2005), especially perhaps in large quantity and for prolonged durations.

Pollen or pollen substitutes fed to the colonies, although not generally used by the beekeepers surveyed by the CCD Working Group, may offer some relief to migratory beekeeping and the potential problems that could result from prolonged use of colonies on a single crop, but care must be taken. Pollen can be a route for transmission of diseases, so only properly treated and sterilized pollen should be used. Pollen substitutes that use soy flour as the main source of protein are not as well accepted, nor as nutritious, as pollen substitutes that avoid the use of soy flour (Saffari et al. 2004). Some soy flours seem to contain anti-feedant compounds that detract from their palatability to honeybees.

The problems that mite parasitosis pose to beekeeping are the same in Canada as in the USA. Varroa infestations have lethal consequences, and must be kept in check. Although varroa is recognized as the major problem, tracheal mites are still very much around. Their presence in the breathing tubes of honeybees has been proven to cause respiratory distress (Harrison et al. 2001; Skinner 2000). Associated with varroa infestations is a complex of viral infections (Kevan et al. 2006). The report of the CCD Working Group includes information on the incidences of various diseases in samples that they examined, but it is too early to conclude cause and effect.

The Working Group also considered pesticide contamination, notably the neonicotinoids (which includes imidacloprid, notorious for its implications in "mad bee disease" (also a colony decline condition), clothianiden, and thiamethoxam). In general, these insecticides are well known to be highly toxic to honeybees, to be highly persistent in the environment, and translocatable in plants and into pollen and nectar. These compounds are becoming increasingly widely used, sometimes on crops for which honeybees are

used for pollination. They are inadequately tested for their hazards to pollinators, even honeybees. Sub-lethal effects of imidacloprid include impairment of memory, and inability to remember (Decourtye et al. 2004); both important to bees that need to forage far from home and find their way back!

Then, what about the chemical and antibiotic cocktails that beekeepers themselves are using in their hives? A chemical pesticide is a poison and the trick in the use of poisons is to differentially kill the pest while not killing the host. That is the basis for pharmacology and administering the right dose. Too much, and the host becomes debilitated, at the least, and may even die, along with the pest. 'The operation was successful, but the patient died!'

The autopsies made by members of the CCD Working Group revealed a number of anomalies and infections, but the data are too preliminary to allow for conclusions about symptoms, effects, and causes.

All in all, it seems that a broad suite of stresses is taking its toll on US honeybees. Are various combinations of stresses resulting in a set of similar symptoms across the country? Stress in general increases human susceptibility to illness, and the same idea applies to honeybees. Stressed, their capacity to ward of primary infections of the well-known suite of larval and adult diseases (Morse and Nowogrodski (editors) 2000) is reduced. Moreover, stressed, their capacity to fight secondary infections, such as of viruses associated with varroa (Kevan et al. 2006) is lessened. Stress, immunocompromization, and unusually serious infections by common pathogens and/or otherwise and usually benign organisms, seem to have combined to produce this devastating condition, CCD.

Although there is no presently confirmed evidence for the same condition's occurrence in Canada, complacency is not recommended. In Canada, we can be proud that Canadian beekeeping seems to be a gentler practice than in the USA, especially when it comes to the major commercial operations there. Canadian beekeepers, by and large, seem to use fewer chemical and antibiotic control agents against pests and diseases than do their US counter parts, and those that are used are applied more conservatively. Migratory beekeeping for pollination services is not so much a part of commercial beekeeping in Canada as it is in the USA, and where it is practised in Canada, the moves are shorter and fewer. Nevertheless, vigilance is required. Beekeeping in Canada and the USA share too many similarities for Canadians to dismiss the problem out of hand. Some reports of higher than expected winter losses are now coming to the attention of the industry, and CCD can not be eliminated as being involved.

In Canada, we may be lucky. We may not. Whatever happens this spring as Canadian beekeepers open their hives, an international effort can work to the benefit of beekeeping continentally. It seems that the industry in the USA will require a major influx of support and funding to rebuild. If Canadian beekeepers do not encounter CCD, the differences between the two countries may provide insights that could help understand, solve, and prevent repetition of the problem. If Canadian beekeepers do encounter CCD, then there is advanced warning from neighbours to the south, and collaboration will be the order of the day.

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Bernie Roitberg

Entomologist Named as Top Graduate Student!

Tara Gariépy

The University of Saskatchewan has awarded the 2007 Governor General's Gold Medal to Tara Gariépy, who recently completed her PhD thesis under the supervision of Martin Erlandson, Ulrich Kuhlmann, and Cedric Gillott. The Gold Medal is awarded annually and recognizes an outstanding graduate student. Tara also received the College of Graduate Studies and Research Thesis Award in the Life Sciences for excellence in the original quality of graduate student research. Tara's thesis is titled 'Molecular markers for *Lygus* parasitoids to assess host specificity of candidate entomophagous biological control agents'. Tara will receive her awards, and her PhD, at Spring Convocation.

In March 2007, NSERC awarded Tara a prestigious Post-doctoral Fellowship, which she will use to further her studies in the biological control area. The location of these studies is yet to be confirmed, though Hawaii is rumored to be the favorite!

Cedric Gillott,
Saskatoon

Insect Families of British Columbia on the Web!

We have just finished the keys to the families of insects known to occur in British Columbia. The project this year covered 74 families in the Exopterygota: 54 Lepidoptera, 12 Neuropteroid insects representing the Orders Megaloptera, Raphidioptera, and Neuroptera, and one Mecoptera, seven Siphonaptera, and one Strepsiptera. It is on our website at www.zoology.ubc.ca/bclepetal.

G.G.E. Scudder,
Professor Emeritus
University of British Columbia

Studies on Neotropical Fauna and Environment

ESC members are invited to submit research articles to *Studies on Neotropical Fauna and Environment*. The aims and scope of the journal include taxonomic and zoogeographic surveys, analyses of animal communities and their relationship with biotic and abiotic environmental conditions. This includes the fauna of both terrestrial and fresh water ecosystems in the Neotropics. Contributions that represent original research and mini-reviews are welcome.

All published research articles in this journal have undergone rigorous peer review, based on initial editor screening and anonymous refereeing by independent expert referees.

For more information about *Studies on Neotropical Fauna and Environment*, please visit the journal homepage at http://www.informaworld.com/nnfe.

Shelley Arthur
Taylor & Francis Ltd
Abingdon, UK

Joint annual meeting of the Entomological Society of Canada and Entomological Society of Saskatchewan

Insects: Microscale Subjects for Megascale Research

Delta Bessborough Hotel

29 September – 3 October 2007, Saskatoon, Saskatchewan

On behalf of the Entomological Societies of Saskatchewan and Canada we cordially invite you to attend the 2007 Joint Annual Meeting to be held at the Delta Bessborough Hotel in Saskatoon, Saskatchewan.

The Delta Bessborough is a venerable Canadian Pacific-style hotel on the bank of the South Saskatchewan River. It is adjacent to the Meewasin Valley Trail which follows the river through the heart of Saskatoon. The Trail encompasses over 21 kilometres of cycling, jogging, and walking routes that travel through beautifully landscaped parks and natural areas. Hundreds of species of birds and other wildlife make their home near the Trail and by Meewasin Riverworks Weir, one of Saskatoon's most popular visitor attractions for viewing wildlife. We encourage you to stay at the Hotel to enjoy the ambience and to help keep our meeting costs down. When registering, please indicate you are with ESC. The meeting room rate is $128 per night plus taxes. Reservations can be made by phoning 1-800-268-1133, or on the web at http://www.deltahotels.com/hotels/hotels.php?hotelId=8.

The theme of 2007 JAM is Insects: Microscale Subjects for Megascale Research. Our Plenary Session features Roy Ritzmann from Case Western Reserve University, who investigates how animals move in their natural environment in order to design and build hexapod robots; and Helen Nichol, from the University of Saskatchewan, who utilizes transgenic Drosophila and synchrotron technology to investigate how cells store and detoxify metals and metalloids. Our first general symposium focuses on different aspects of insect-microbe interactions, and our second symposium examines basic and applied aspects of neuroethology.

To take a break from the innovative science program, we plan to have a mid-meeting excursion to Wanuskewin Heritage Park. Here we will see the prairie as it was before European settlement, and we may even have an opportunity to do some insect observation. Our Heritage Lecture and Annual General Meeting are scheduled to take place at Wanuskewin.

More information is posted on the websites of ESC (www.esc-sec.org) and ESS (www.sfn.saskatoon.sk.ca/science/ess/ESS-ESC/intro.html). Remember, abstracts are due by 29 June, and registration at the low rate must be received before 25 August.

For further information contact:

Dwayne Hegedus, JAM 2007 Organizing Chair
Agriculture and Agri-Food Canada
107 Science Place
Saskatoon, SK S7N 0X2
tel: 306-956-7667
e-mail: hegedusd@agr.gc.ca

JAM 2007: Tentative Program

Saturday, 29 September
Morning and afternoon: ESC Governing Board Meeting
Afternoon & evening: Registration

Sunday, 30 September
Morning: Opening ceremonies, ESC awards, Gold Medal Address and Plenary Session
Afternoon: President's Prize sessions
Evening: General mixer

Monday, 1 October
Morning: President's Prize sessions
Afternoon: Wanuskewin Tour, Heritage Lecture – Dr. Peter Harris, Scientist Emeritus AAFC, ESC Annual General Meeting
Evening: ESC Governing Board Meeting, President's reception and student social (by invitation)

Tuesday, 2 October
Morning: Symposium I – Insect-Microbe Interactions
Afternoon: Student-organised symposium, poster presentations, contributed paper sessions & workshops
Evening: Banquet and student award presentations

Wednesday, 3 October
Morning: Symposium II - Basic and Applied Aspects of Neuroethology, Contributed paper sessions

Associated meetings

Friday, 28 September - AAFC Biological Control Working Group Meeting at AAFC
Contact Peter Mason (AAFC Ottawa) masonp@agr.gc.ca
Monday, 1 October - Canadian Forum for Biological Control
Contact Kevin Floate (AAFC Lethbridge) floatek@agr.gc.ca
Wednesday, 3 October - Biological Survey of Canada
Contact: Susan Goods sgoods@mus-mature.ca

NOTICE

The Student Affairs Committee of the Entomological Society of Canada plans to hold a silent auction at the 57th Joint Annual Meeting at Saskatoon. The Committee is in search of entomology-related articles that patrons are willing to donate for auction. Here is an opportunity to downsize your entomological library, find a home for those collecting materials that you haven't used in years, or recycle useful entomological material in general. Proceeds will go towards student activities of the ESC.

REGISTRATION FORM

Deadline for early registration is August 25th. Note: On line secure-site registration can be made through: www.sfn.saskatoon.sk.ca/science/ess/ESS-ESC/intro.html
Please fill out a separate registration form for each registrant, even if paying for several. Accompanying persons need not fill out an additional form.

Name:……
As you wish it to appear on your name tag

Title and Affiliation:……

Address:……

City:…… Province/State:……..

Postal Code……..... E-mail:……...……...

Telephone…… FAX……..

Registration fee in $Cdn includes Program and admittance to meetings, trip to Wanuskewin, mixer and banquet, and GST. Extra banquet tickets also may be purchased at the registration desk.

	Before August 25	After August 25	Amount
Regular member	$215	$315	…….
Non-member	$305	$410	…….
Student members, retirees	$100	$160	…….
Student non-member	$140	$180	……..
Accompanying member	$ 80	$120	……..
Extra banquet ticket	$ 50	$ 50	…….
Total Amount Due			**$……**

Name of accompanying person……

Cancellation policy: before 25 August – full refund; before 15 September – 40% refund, on or after 15 September, no refund.

Please indicate if banquet preference is a vegetarian dish..... ☐

Accommodation: Rooms at $129/night have been reserved for participants at the Hotel Bessborough. To obtain this reduced rate indicate that you are attending "ESC" when making reservations. This rate will end 27 August. Any groups requiring additional meeting rooms should contact the conference organizers.

Hotel reservations are available through:

Delta Bessborough Hotel
601 Spadina Crescent East
Saskatoon, SK
Tel: 1-800-268-1133 / (306) 244-5521
FAX (306) 665-9769
www.deltahotels.com/hotels/hotels.hp?hotelId=8

If registering by mail, return this form and a cheque made out to "ESC Meeting 2007" to:

Julie Soroka – ESC JAM 2007
Agriculture and Agri-Food Canada
107 Science Place
Saskatoon, SK S7N 0X2
Email: sorokaj@agr.gc.ca
Tel: 306-956-7294, FAX: 306-956-7247

CALL FOR SUBMITTED PAPERS AND POSTERS
DEADLINE FOR SUBMISSION: June 29, 2007

Categories of presentation: Oral presentation - Regular or President's Prize*
Poster presentation - Regular or President's Prize*

Presentations (including the Abstract) may be given in either official language.

* President's Prize Eligibility Criteria: Candidate is
- currently enrolled in a degree program or has graduated from a degree program since the last annual meeting
- registered at the meeting and has designated the President's Prize category at the time of abstract submission
- the principal researcher of the paper or poster

Abstracts (not more than 70 words) should be submitted by e-mail to cedric.gillott@usask.ca in Rich Text Format (rtf). Abstracts should include the following information, as per the example: 1) authors' names, with name of presenter in **bold** font, 2) authors' addresses and affiliation, 3) presentation title, 4) presentation category and language of presentation 5) summary text.

Tara D. Gariepy[1,2,3], Ulrich Kuhlmann[2], Cedric Gillott[3], Martin Erlandson[1]

[1]Agriculture and Agri-Food Canada, Saskatoon Research Centre, Saskatoon, SK Canada, S7N 0X2; [2]CABI Bioscience Switzerland, Rue des Grillons 1, CH-2800 Delémont, Switzerland; [3]Department of Biology, University of Saskatchewan, 112 Science Place, Saskatoon, SK Canada, S7N 5E2.

A Molecular Approach to Evaluating the Ecological Host Range of European *Peristenus* spp. (Hymenoptera: Braconidae), Parasitoids of *Lygus* spp. (Hemiptera: Miridae)

(Oral, President's Prize - English Presentation)

Molecular methods for detecting and identifying parasitoids within their hosts may expedite ecological studies prior to introducing exotic biological control agents. To determine the utility of molecular diagnostics in non-target risk assessment of European parasitoids of *Lygus* (Hemiptera: Miridae), a multiplex PCR assay for *Peristenus* (Hymenoptera: Braconidae) was applied to field-collected target and non-target mirids. Parasitism levels and parasitoid species composition based on rearing, dissection, and molecular analysis were compared.

Oral presentations (regular and President's prize) will be 12 minutes plus 3 minutes for questions and discussion. Presentations in PowerPoint only, using common Windows fonts for text and symbols and with limited use of animation. Facilities for loading oral presentations from USB storage devices or CD-R formats will be provided at designated times during the meeting.

Poster presentations should be sized to fit a 1.2 (h) x 1.0 (w) metre format.

Congrès cojoint de la Société d'entomologie du Canada et de la Société d'entomologie du Saskatchewan

Les insectes : Petits sujets pour de grandes recherches

Hôtel Delta Bessborough

29 septembre – 3 octobre 2007, Saskatoon, Saskatchewan

La Société d'Entomologie de la Saskatchewan et la Société d'Entomologie du Canada vous invitent cordialement à participer à leur réunion annuelle conjointe, qui se tiendra à l'hôtel Delta Bessborough à Saskatoon, Saskatchewan.

L'hôtel Bessborough est un ancien hôtel construit par la compagnie de chemin de fer "Canadien Pacifique", sur les bords de la rivière Saskatchewan. De l'hôtel, il est facile d'accéder au sentier de randonnée de Meewasin qui longe les bords de la rivière sur 21 km, sans sortir de la ville. Le sentier, réservé aux cyclistes, randonneurs et coureurs, traverse plusieurs parcs d'activités et zones d'espaces naturels. Les promeneurs peuvent y observer de nombreuses espèces d'oiseaux et autres animaux sauvages qui y ont élu domicile. Le sentier passe également à hauteur du barrage de Meewasin, endroit idéal pour y observer la faune sauvage.

Nous vous encourageons à séjourner à l'hôtel Bessborough afin de profiter de l'ambiance locale et des avantages liés à sa situation géographique. Par ailleurs, votre présence regroupée dans ce lieu d'accueil nous permet de maintenir au plus bas les coûts de la conférence. Au moment de votre réservation, n'oubliez pas d'indiquer que vous participez à la réunion SEC/SES. Le prix des chambres pour les participants est de $128/nuit + taxes. Les réservations peuvent se faire par téléphone (1-800-268-1133), ou par internet: http://www.deltahotels.com/hotels/hotels.php?hotelId=8.

Le thème de la réunion annuelle conjointe de 2007 est défini comme suit "Les insectes: petits sujets pour de grandes recherches". Les invités à la session plénière sont Roy Ritzmann de l'Université Case Western Reserve, qui étudie la dynamique du mouvement chez les animaux dans le but de concevoir et construire des robots hexapodes ainsi que Helen Nichol de l'Université de la Saskatchewan, qui se sert de drosophiles modifiées génétiquement et des techniques du synchrotron pour étudier les mécanismes de conservation et de détoxification des métaux et métalloïdes par les cellules. Les interactions « insectes - microbes » et la recherche fondamentale et appliquée en neuro-éthologie seront les thèmes des deux sessions plénières.

Si vous souhaitez vous détacher du programme scientifique pendant quelques heures, une excursion à Wanuskewin est prévue pendant la conférence. Vous pourrez alors bénéficier d'un aperçu sur l'aspect des prairies avant l'arrivée des pionniers européens et y observer de nombreuses espèces d'insectes. La conférence sur le patrimoine et l'Assemblée Générale auront lieu à Wanuskewin. Nous vous invitons à trouver plus d'informations sur les sites de la SEC (www.esc-sec.org) et de la SES (www.sfn.saskatoon.sk.ca/science/ess/ESS-ESC/intro.html) et nous vous rappelons que la date d'envoi limite des résumés est fixée au 29 Juin et que les tarifs d'inscription à la conférence augmentent après le 25 Août.

Pour plus ample information, contactez :

Dwayne Hegedus, JAM 2007 Organizing Chair
Agriculture and Agri-Food Canada,
107 Science Place, Saskatoon, SK, S7N 0X2
tel: 306-956-7667; e-mail: hegedusd@agr.gc

RAC 2007: Programme provisoire

Samedi 29 Septembre

Matinée et après-midi: Réunion du Conseil d'Administration de la SEC
Après-midi et soirée: Inscriptions

Dimanche 30 septembre

Matinée: Inscriptions, cérémonie d'ouverture, remise de la médaille d'or, Assemblée plénière
Après-midi: Communications scientifiques, prix du Président
Soirée: Réception générale

Lundi 10 Octobre

Matinée: Communications scientifiques, prix du Président
Après-midi: excursion à Wanuskewin: conférence sur le patrimoine, Assemblée Générale de la SEC
Soirée: Réunion du Conseil d'Administration de la SEC, Réception du Président et soirée étudiante (sur invitation)

Mardi 2 Octobre

Matinée: Symposium I – Interactions « insectes - microbes »
Après-midi: Symposium étudiant, présentations des posters, communications scientifiques et groupes de travail
Soirée: Banquet et présentations des prix étudiants

Mercredi 3 Octobre

Matinée: Symposium II - Recherche fondamentale et appliquée en neuroéthologie. Communications scientifiques.

Autres réunions

Samedi 29 septembre - Groupe de travail AAC, Contrôle Biologique
Contact: Peter Mason (AAC-Ottawa) masonp@agr.gc.ca
Lundi 1er Octobre - Forum Canadien sur le Contrôle Biologique
Contact: Kevin Floate (AAC-Lethbridge) floatek@agr.gc.ca
Mercredi 3 Octobre - Commission Biologique du Canada
Contact: Susan Goods sgoods@mus-mature.ca

AVIS

Le comité des affaires étudiantes de la SEC souhaite organiser une vente aux enchères par écrit à l'occasion de la 57ème réunion annuelle à Saskatoon. Le comité recherche toute donation d'articles reliés de près ou de loin à l'entomologie. Cette vente est une excellente opportunité pour réduire l'excès de livres dans leurs bibliothèques, trouver un nouveau foyer pour ces articles que personne n'a utilisé depuis plusieurs années ou participer à un recyclage général des articles relié à l'entomologie. Les bénéfices iront directement aux bourses d'études pour les étudiants.

BULLETIN D'INSCRIPTION

Note: L'inscription peut se faire en ligne sur le site sécurisé suivant : http://www.sfn.saskatoon.sk.ca/science/ess/ESS-ESC/intro.html, ou en envoyant les bulletins ci-dessous dûment remplis.
Chaque participant doit remplir et envoyer un bulletin d'inscription, même dans le cas de paiements combinés. Les invités n'ont pas besoin de remplir de bulletin d'inscription.

Nom :……

Titre et affiliation : ……

Adresse : ……

Ville : …… Province/État : ……

Code postal : …… Courrier électronique : ……

Téléphone : …… Télécopieur : ……

	Avant le 25 août	Après le 25 août 2007	Sommes dues
Membre régulier	$215	$315	……
Non membre	$305	$410	……
Étudiant membre, retraité	$100	$160	……
Étudiant non membre	$140	$180	……
Accompagnateur	$ 80	$120	……
Banquet billet supplémentaire	$ 50	$ 50	……
Somme totale due			$.....

Nom de l'accompagnateur : ……

Remboursement en cas d'annulation : complet si la demande est faite avant le 25 août 2007, 40% si la demande est faite avant le 15 septembre 2007, pas de remboursement si la demande est faite le 15 septembre 2007 ou après.

Indiquer le nombre de repas végétarien au banquet : ..... ☐

Logement : des chambres à un tarif réduit de $128/nuit ont été réservées pour les participants à l'hôtel Delta Bessborough. Indiquer votre participation à la réunion ESC-ESS lors de la réservation pour obtenir ces tarifs réduits. Ces tarifs réduits ne seront plus disponibles après le 27 août 2007. Tout groupe souhaitant réserver des chambres additionnelles doit contacter les organisateurs de la conférence.

Pour les réservations à l'hôtel, contacter :

Hotel Delta Bessborough,
601, Spadina Crescent
Saskatoon, SK
Téléphone: 1-800-268-1133 / (306) 244-5521
Télécopieur: (306) 665-9769
www.deltahotels.com/hotels/hotels.php?hote1ID=8

Envoyer votre bulletin d'inscription dûment rempli et un chèque libellé au nom de "ESC meeting 2007" à :

Julie Soroka
Agriculture et Agro-Alimentaire Canada
107, Science Place,
Saskatoon, SK, S7N 0X2
Courrier électronique : sorokaj@agr.gc.ca
Téléphone: (306) 956-7294,
Télécopieur: (306) 956-7247

Invitation à soumettre des communications et des affiches

Date limite : Le 29 juin 2007

Catégorie de présentation : Présentation orale – Régulière, prix du président*
Présentation par affiche – Régulière, prix du président*

Les présentations (résumés inclus) peuvent être en anglais ou en français.

Pour être admissible au prix du président, le candidat doit satisfaire aux conditions suivantes:

- Être inscrit à un programme de maîtrise ou doctorat ou avoir terminé un tel programme depuis la réunion annuelle précédente (novembre 2006).
- Être inscrit à la conférence et indiquer la catégorie « Prix du président » lors de la soumission du résumé.
- Être l'auteur principal de la présentation orale ou de l'affiche.

Résumé : Les résumés (maximum de 70 mots) doivent être envoyés par courrier électronique à Cedric.gillott@usask.ca en format « Rich Text Format (rtf). Les informations requises pour les résumés sont les suivantes : 1) nom des auteurs, incluant le nom du présentateur en gras, 2) adresses et affiliations des auteurs, 3) titre de la présentation ou de l'affiche, 4) catégorie et langue de la présentation, 5) résumé.

Chrystel Olivier[1], Gillian Murza[1], Owen O. Olfert[1] and Ginette Séguin-Swartz[1].

[1]Agriculture and Agri-Food Canada, Saskatoon Research Centre, 107 Science Place, Saskatoon, Saskatchewan, S7N 0X2, Canada

Les populations de cicadelles et l'incidence de la chloranthie du colza en Saskatchewan.

(Présentation orale, en français)

L'incidence de la chloranthie et la densité de la population du vecteur principal, *Macrosteles quadrilineatus*, dans des cultures de colza et de céréales ont été évaluées de 2001 à 2003. Les études ont montré que d'autres espèces de cicadelles étaient également porteuses de phytoplasmes. La méthode PCR a été utilisée pour estimer le pourcentage de cicadelles infectées. Les données sont utilisées pour développer un système d'avertissement des épidémies de chloranthie.

Présentation orale (régulière et prix du président) : durée de 12 minutes, suivi de 3 minutes de questions et discussions. Support de présentation Power Point avec les polices de caractères et les symboles en format d'édition commun Windows, usage limité des animations. Apporter votre présentation sur disque CD-R ou USB. Les endroits et périodes de chargement des présentations seront indiqués lors de la réunion.

Affiche : hauteur maximale de 1,2m et largeur maximale de 1,0m.

***Ladybugs of Alberta*.** Acorn, J. 2007. University of Alberta Press, Edmonton, AB. xxx + 169 pp. ISBN 0888643810 (paperback) CAN $29.95.

This bug book is simply marvelous! Formatted as a field guide, the first for North American beetles of the family Coccinellidae, it fulfils that function admirably. In fact, Acorn treats all 75 species of ladybugs in Alberta, including the tiny ones in the subfamily Scymninae that few people ever notice. This is more than three times as many species as Acorn's two other books in his pathbreaking series (Tiger Beetles, and Damselflies) by University of Alberta Press. *Ladybugs of Alberta* is also packed with plenty of original information that clearly makes it Acorn's most scholarly book to date.

Even though its scientific quality is near that of a monograph, the style of Acorn's book is highly readable. There are excellent sections on the identification, life history and study of ladybugs (= ladybird beetles), highlighted with gorgeous photos of living specimens of most species. As with previous books in the series, Acorn has continued to provide catchy rhymes that introduce each species treatment, and in this volume he has added short sections on the derivations of each scientific name. Many of the common names are newly coined for this book, and they seem appropriate and destined to gain wide usage. The book is rounded out with a gallery of drawings that aid comparison of species for quick visual identification.

Ladybugs have enormous public visibility. After all, who doesn't know the children's rhyme that starts "Ladybug, ladybug, fly away home". They are important in the biological control of aphids, with numerous gardening supply outlets offering to ship a supply of ladybugs, and there is considerable awareness and concern about the steady invasion of foreign species ladybugs that threaten to decimate our native assemblages of these beetles. It is in this context that the subtitle of the book, "Finding the spots and connecting the dots", becomes clear and Acorn's keen grasp of entomology and public perception really shines. In particular, chapter 4 is an extended, thought-provoking essay on introduced ladybugs and conservation. It makes a very useful contribution to our understanding of insects in general, with an optimistic outlook on alien invaders but a dim view of the use of ladybugs in gardening. This shift in attitudes may seem maverick, but a brief review of the most recent scientific literature shows that Acorn is at the leading edge of a reassessment of these issues.

No review would be complete without at least a few suggestions for improvement. It would have been helpful to give scale bars in the identification gallery, and the arrow for the maxillary palp points to part of an antenna on page xxx. I would have liked more standard references to scientific papers in the body of the text. But these items are minor.

Ladybugs of Alberta is a treat all around. As the first popular guide ever produced on ladybugs in North America, it is filled with ideas and exhortations to further research on these lovely beetles. The book is sure to have a huge impact well outside of Alberta. No one interested in natural history, entomology, gardening, or integrated pest management should be without it.

Felix Sperling
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University of Alberta
Edmonton, AB

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

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Kentville, NS B4N 1J5 Canada
Tel: 902-679-5731 Fax: 902-679-2311
E-mail: mackenziek@agr.gc.ca

D. Christopher Darling

Michael (Mike) Spironello
21 October 1977 – 24 May 2006

The Canadian entomological community lost a rising star with the untimely passing of Mike Spironello. In the final year of his PhD program at the University of Toronto and Royal Ontario Museum, Mike had made tremendous progress in his study of the speciation process in black flies. What set him apart from most other researchers was his versatility — his ability to use a combination of morphological, cytological, and molecular approaches in his analyses of black fly evolution. The death of someone with such promise and vigor, and at such an early stage in his career, is a major loss to our community.

Mike was deeply engaged in both the Entomological Society of Ontario and the North American Black Fly Association (NABFA). He was Secretary of the latter organization and designer of their website, serving as web master until the time of his death. He was also a charter member of the fledgling Canadian Society for Ecology & Evolution, giving a presentation of his research at the April 2006 organizational meeting in Montreal. Mike was highly productive throughout his graduate career, contributing numerous publications and conference presentations (cf. bibliography). He also contributed towards the success of the University of Toronto's undergraduate program, having served as a Teaching Assistant to several cohorts of students in Introductory Biology and Entomology.

In addition to excelling in academic pursuits, Mike was equally gifted as a musician and athlete. When he wasn't in the lab he enjoyed making music, racing his bike, or teaching one of his beloved 'spinning' classes. Spinning involves the use of stationary bicycles in a classroom setting, and Mike was famous locally for his musical theme nights. So popular were his classes — in which he sometimes dressed up as a cowboy, a disco king, or even Madonna — that he was the subject of several newspaper and magazine articles. Spinning was created in the 1980s by an ultra-endurance athlete, and participants are intended to set goals based on their heart rate. Ironically, despite the fact that Mike was in outstanding physical condition, he succumbed to heart failure while teaching one of his classes. The cause of death was myocarditis, an uncommon infection that weakens the heart and is responsible for 20% of all cases of sudden death in young adults. Mike was unaware that he had contracted the disease.

Despite his many accomplishments as scholar, musician and athlete, Mike will be remembered most for his outstanding human qualities. He had a charisma about him that attracted friends and admirers from his many walks of life; yet through it all he remained humble to a fault. The fact that his funeral attracted more than 600 people is testimony to the number of lives that Mike touched during his 28 years.

On his death, Mike's family requested that donations be made to two institutions that were near and dear to his heart: the Entomological Society of Canada and the Wildlife Research Station in Algonquin Park, Ontario. This was

apropos given Mike's enthusiasm for insects, and his particular fascination with black flies. He was among the few people I know who willingly shared northern Ontario with the vernal hordes. In fact, Mike returned from a northern fishing trip just a day before his death. He marveled in his final e-mail message to me that he "was swarmed by vennies [*Simulium venustum*] in Cochrane!" His message concluded "Very north and very early for those little buggers". Others might have used less temperate language to describe these noxious pests.

To honor his memory the North American Black Fly Association has established the Mike Spironello Award, which is presented each year to the student who gives the best talk at the annual meeting. And as a further tribute to Mike's contributions to simuliidology, Doug Craig (University of Alberta), Fiona Hunter (Brock University), and I have joined together to formally name a new species of black fly after him (Craig et al., 2006). I think he would have appreciated that.

Refereed Publications of M. Spironello:

Bidochka, M.J., C.N. Small, and M. Spironello. 2005. Recombination within sympatric cryptic species of the insect pathogenetic fungus *Metarhizium anisopliae*. Journal of Environmental Microbiology. Environmental Microbiology 7: 1361-1368.

Craig, D.A., D.C. Currie, F.F. Hunter and M. Spironello. 2006. A taxonomic revision of the southwestern Pacific subgenus *Hebridosimulium* (Diptera: Simuliidae: Simulium). Zootaxa 1380: 1-90.

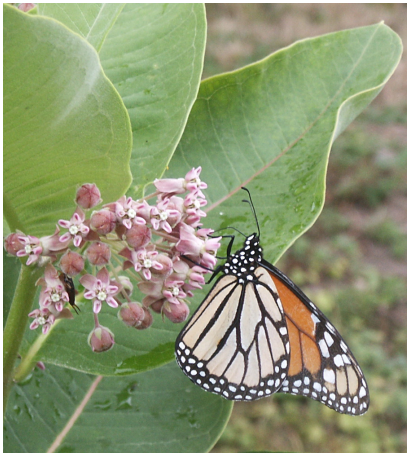
Spironello, M. and F.F. Hunter. 2005. Polytene chromosomes of an archipelagic subgenus, *Inseliellum* (Diptera: Simuliidae). Genetica 123: 217-226.

Spironello, M. and F.F. Hunter. 2004. An intra- and interisland study of the polytene chromosomes of *Simulium exasperans* (Diptera: Simuliidae). Canadian Journal of Zoology 82: 808-816.

Spironello, M. and D.R. Brooks. 2003. Dispersal and Diversification: macroevolutionary implications of the MacArthur-Wilson model, illustrated by *Simulium* (*Inseliellum* Rubstov) (Diptera: Simuliidae). Journal of Biogeography 30: 1563-1573.

Spironello, M., F.F. Hunter, and D.A. Craig. 2002. A cytological study of the Pacific black fly, *Simulium cataractarum* (Diptera: Simuliidae). Canadian Journal of Zoology 80: 1810-1816.

Douglas C. Currie,
Department of Natural History, Royal Ontario Museum &
Department of Ecology & Evolutionary Biology, University of Toronto
Toronto, Ontario



Kevin Floate

Monarch butterfly, *Danaus plexiplus* (Lepidoptera: Nymphalidae)

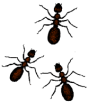
(continued from p. 96)

2006 was the European Giant House spider (*Tegenaria duellica*). I had never heard of these until a lady brought me a specimen that she had caught in her house. The next day she turned up with an even larger specimen. I don't know what impressed me more. The size of these monsters or the fact that this lady had collected them live by hand.

I already have a 'way cool' example for 2007 that will be very tough to beat. A colleague and I have identified a population of several hundred thousand human bedbugs (*Cimex lectularius*) at a poultry operation. Have a 'way-cool' example to share with your fellow entomologists? Send it to me and we'll print it in the *Bulletin*.

(suite de la p. 96)

J'ai déjà un exemple 'super cool' pour 2007, qui sera plutôt difficile à battre. Un collègue et moi avons identifié une population de plusieurs centaines de milliers de punaises de lit (*Cimex lectularius*) dans une exploitation avicole. Vous avez un exemple 'super cool' à partager avec vos semblables entomologistes? Envoyez-le moi et nous le feront paraître dans le *Bulletin*.



Society business / Affaires de la société

Interim meeting of the Executive Council, April 21, 2007

Rick West, Secretary

Requests from CPS to use photos and content from *DVPCC* book

A draft of a letter authorizing the Canadian Phytopathological Society to use photos and content from the *DVPCC* book, provided that copyright by the ESC was acknowledged, was approved.

ESC and Foreign Affairs

President Dixon will write to the Department of Foreign affairs indicating that the Society supports the listing of "Entomologists" as a category in the temporary entry chapter of Canada's future trade agreements.

Strategic Review

The Executive reviewed the Strategic Review document produced by R. Lamb in 2005 and recommended that the Membership Committee continues its thorough monitoring of membership trends and that it encourages mutual renewal of memberships (ESC and regional) with the regional societies. P. Dixon will review committee restructuring with R. Lamb and report back to the Board.

Information technology (Electronic review process)

Progress has been made in establishing the electronic review process using Simon Fraser University's open journal system. P. Fields will investigate the forms/template used by the Entomological Society of America to provide electronic balloting to its members and determine the applicability of this to the ESC for elections and approving Standing Rule changes.

Treasurer

A report and summary analysis of the Society's financial status was presented by P.

Bouchard. In 2006, revenue was $202 892 and expenses were $240 865. This results in excess expenditure of $37 973. The major increase in expenditure (increases in mailing/publishing *TCE*, overlap in office salaries), combined with a decrease in revenue (decreased reprint orders, institutional subscriptions, sale of back issues; and unfavourable exchange rates), led to an overall decrease of approximately $19 000 in the Society's bottom line (balance at the end of 2005 was $825 764 versus $808 180 in 2006).

ESC Headquarters Committee

Plans are to paint some interior walls and make minor repairs. A new computer and printer will be purchased this spring.

Finance Committee

The following items need to be examined by the Finance Committee

- Reduced page charges for members
- Membership fee, subscription fee and book sale review
- Charges neutral to currency rates
- Online purchasing of memberships (e.g., through PayPal)

Scientific Editor

As of 31 March 2007, Division Editors are: Gilles Boiteau (Divisions 4 & 6), Chris Buddle (Division 5), Yvan Pelletier (Division 3), and Terry Wheeler (Division 2). A number of new Associate Editors have been appointed: Adam Brown, Jan Klimaszewski, Don Lafontaine, Sandy Liebhold, Dave McCorquodale, Dan Miller, Brad Sinclair, and Jeff Skevington. Fifty manuscripts were received during the period 1 October 2006 to 31 March 2007: 29 by outgoing Editor-in-Chief R. Ring, 21 by incoming Editor-in-Chief R. Bennett. Thirteen have been accepted, 15 are in review or being revised, 22 have been rejected (includes 16 rejected by the Editor-in-Chief or a Division Editor without further review). The "Editorial Duties" document was revised in January 2007 to ensure the hierarchical flow of all manuscripts through the review process in preparation for the transition to the "Open Journal System" web-based review process for *TCE* manuscripts.

Editor - *Bulletin*

The transition of the editorship from P. Fields to K. Floate has gone very well. At the recommendation of K. Floate, the Executive supports a mass-email to ESC members to advise them when new issues of the *Bulletin* are posted on the ESC website. A request from the publisher Taylor and Francis to put an announcement in the *Bulletin* promoting a new journal, *Neotropical Fauna and Environment*, was approved since it is of general entomological interest.

Web Site

FTP access to the web site will be given to the Secretary and Office Manager to update pages dealing with Board activities and membership lists, respectively. FTP access for the student representative(s) will be discussed after the web site is redesigned. B. Lyons will meet shortly with a group at the University of Guelph to discuss and possibly undertake a redesign of the web site.

Publications Committee

A revision of the Editorial Duties was completed. Terry Wheeler for Divison 2 and Gilles Boiteau for Divisions 4 & 6 were appointed as Division Editors and new Associate Editors Adam Brown, Jan Klimaszewski, and Brad Sinclair, were appointed. The 'Instructions to Authors' document was revised. The Committee is pleased with the work of the new Editor-in-Chief, Robb Bennett.

The ESC has supported the retention of the *Pest Management Research Report* (*PMRR*) in the short-term by adding a link on our website to the website of the Canadian Phytopathological Society where the *PMRR* are stored currently. The Executive Council asks the Publications Committee to consider if the Society should provide longer-term support to the *PMRR*, and how we might do this.

The Executive charged the Publications

Committee to develop and recommend a policy on the use of material, graphics and articles, from *TCE* for various purposes. D. Quiring and P. Fields will work with the Publications and Finance committees and the National Research Council to identify ways in which the journal can be promoted while reducing costs (e.g., in lieu of mailing/printing reprints, authors pay for open access to pdf versions of their papers, increasing charges to authors and subscribers, electronic only publication, ownership of *TCE*). A document, outlining conditions of use for downloading documents and photos from the web site, needs to be written for posting on the web site. The issue of copyright of CD copies of the *Memoirs* is under investigation.

Nominations Committee

Maya Evenden and Julie Soroka were nominated for the office of Second-Vice President. Gaétan Moreau and Kathleen Ryan were nominated for the office of Director-at-Large.

Achievement Awards Committee

The Achievement Awards Committee will provide recommendations for the Gold Medal and Hewitt awards shortly and has confirmed the eligibility of the Entomological Society of Saskatchewan's recommendation for the Criddle Award.

Bilingualism Committee

The Committee is doing excellent work translating material for the elections and *Bulletin* and has begun work on translating sections of the website.

Heritage Committee

The addendum to the *Index to Biographies of Canadian Entomologists* needs to be posted on the web site.

Insect Common Names and Cultures Committee

The Committee intends to update the current list of common names to include material from lists by the CFIA (Canadian Food Inspection Agency), PMRA (Pest Management Regulatory Agency), and Quebec ministry of Agriculture. These lists need to be amalgamated – the ESC list is the "official" one and the others should use it, but it needs to be publicized more.

Membership Committee

Membership numbers as of April 2007 are down from those of April 2006. The Committee recommended that a change in renewal times be considered. The Executive Council recommended that electronic join/renewal notices be sent out one month prior to the AGM and that arrangements be made with the regional societies to encourage their members to join/renew ESC memberships. ESC members also need to be encouraged to join/renew membership with their regional society. Ed Becker, Editor of the *Senior Entomologists Newsletter*, will be asked to encourage emeritus members to renew their memberships.

Student Awards Committee

The winners of the Scholarships for 2007 are:

Graduate Research-Travel Scholarship - Yvan Boulanger (MSc student, University of Quebec at Rimouski)

Postgraduate Scholarships - Jennifer Perry (PhD student, University of Toronto), Marla Schwarzfeld (MSc Student, University of Alberta).

John Borden Scholarship in IPM – Lisa Conroy (MSc student, University of Guelph)

Keith Kevan Award – Tonya Mousseau (PhD student, University of Calgary)

NOTE: The deadline to apply for the Student Conference Travel Award is 29 June 2007.

Science Policy Committee

Regional Societies are encouraged to request funding for public awareness projects from the Science Policy Committee. A request to support the establishment of the South Okanagan - Similkameen National Park Reserve has been

put on hold until various issues between ranchers and Parks Canada are resolved.

Student Affairs

A reminder to apply for student awards was placed in the current (Dec 2006) edition of the *Bulletin* and a mass email was sent out to all student members who have currently paid their dues. The Executive Council agreed that an email from the student affairs committee be sent to students who have not renewed their memberships. The format for next years Student Reception will be similar to last year, where students get to meet one another before heading off to the General Reception. The Student Reception should be discussed with local organizers. A preliminary policy for providing feedback for President's Prize speakers is being constructed and will be ready to be voted on prior to the upcoming meeting in November. A reminder email soliciting submission for the grad student symposium will be sent out at the end of May and the symposium announcement will again be printed in the upcoming *Bulletin*. The committee continues to provide a list of recent graduates in entomology for publication in the *Bulletin*. The Silent Auction at the Annual Meeting will continue and donations are welcome.

Marketing Committee

The Marketing Committee reviewed the matter of scanning back-issues of ESC *Memoirs*, especially copies that are in frequent demand. P. Bouchard met with Derna Lisi and a list of those issues that are low in stock has been prepared.

Annual Meeting Committee

The 2007 meeting plans are proceeding well. The 2008 meeting will be held October 19-22 at the Crowne Plaza Hotel in Ottawa (John Huber/Fiona Hunter - contacts). An invitation to hold the 2009 JAM in Manitoba was received from Rheal Lafreniere of the Entomological Society of Manitoba. T. Shore will contact the ESBC and AES regarding meetings in 2010 and 2111, respectively. Translation of abstracts of papers/posters presented at annual meetings is to be encouraged. JAM organisers will be contacted to discuss ways to reduce the amount of time devoted to presenting awards at the banquet.

President's Prize Competition

T. Shore continues to have discussions with the affiliates; however, it is difficult to standardize student awards since several regional societies have their own awards.

Biological Survey of Canada

The Canadian Museum of Nature has undertaken to hire a temporary one-year replacement for the Head of the Secretariat, overlapping with Dr. Hugh Danks (who retires at the end of August 2007), pending completion of a strategic review. During that review, the long-term status of the BSC will be considered. The Scientific Committee and the ESC have written to the President of the CMN pointing out the national importance of the Survey and urging its continuation. President Dixon gave thanks on behalf of the Society to H. Danks at a dinner in his honour on April 19, 2007.

Affiliated Entomological Societies

Updates were received from all regional societies, but there were no requests for action. The Executive felt that the relationships between the ESC and the regional societies should be strengthened to improve renewal of memberships and develop better science policy.

Overall financial assessment of the Entomological Society of Canada

	2006	2005	2004	2003	2002
Balance beginning of year	**825,764**	**803,884**	**748,731**	**740,527**	**706,225**
Total revenue (General account)	202,892	206,712	217,386	209,502	231,169
Total expenditure (General account)	240,865	204,015	207,232	213,075	208,136
Excess revenue (expenditure) for year (General account)	(37,973)	2,697	10,154	(3,573)	23,033
Gain (loss) on sale of investment (General account)	NA	(178)	250	(431)	150
Interest on investment (General account)	18,869	14,964	14,083	13,639	13,496
Net revenue (expenditure) for year (General account)	(19,104)	17,483	24,487	9,635	36,679
Net revenue (expenditure) - Endowment fund	(639)	529	362	668	1,377
Net revenue (expenditure) - Scholarship fund	10,642	11,994	37,210	6,114	3,955
Expenses / taxes / depreciation of ESC Head Office	(8,483)	(8,126)	(6,906)	(8,213)	(7,709)
Balance end of year	**808,180**	**825,764**	**803,884**	**748,731**	**740,527**

Negative values are in parentheses
For full details, please see http://www.esc-sec.org/ and click on Member area

Officers of affiliated societies, 2006-2007
Dirigeants des sociétés associées, 2006-2007

Entomological Society of British Columbia

President	Richard Ring
President-Elect	John McLean
Past President	Karen Needham
Editor (Journal)	Ward Strong
Editor (Boreus)	Jenny Heron
Sec.-Treasurer	Lorraine Maclauchlan

BC Ministry of Forests & Range
515 Columbia St., Kamloops, BC V2C 2T7
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Tel: (250) 828-4197
http://esbc.harbour.com/

Entomological Society of Alberta

President	Maya Evenden
Vice-President	Jeff Battigalli
Past President	John Acorn
Editor (Proceedings)	Stephanie Erb
Editor (Website)	Troy Danyk
Treasurer	Kimberly Rondeau
Secretary	Mike Undershultz

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Tel: (780) 422-1508
http://www.biology.ualberta.ca/courses.hp/esa/esa.htm

Entomological Society of Saskatchewan

President	Julie Soroka
President-Elect	Bryan Sarauer
Past President	Art Davis
Treasurer	Dwayne Hegedus
Newsletter Editor	Brian Galka
Secretary	Larry Grenkow

Agriculture and Agri-Food Canada
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E-mail: grenkowl@agr.gc.ca
http://www.sfn.saskatoon.sk.ca/science/ess/ESS.html

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

Entomological Society of Manitoba

President	Blaine Timlick
President-Elect	Désirée Vanderwel
Past-President	Rheal Lafreniere
Treasurer	Ian Wise
Newsletter Editors	Manhood Iranpour
	Patricia MacKay
Editor (Proceedings)	Terry Galloway
Member-at-Large	John Gavloski
Secretary	David Ostermann

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

Entomological Society of Ontario

President	Blair Helson
President-Elect	Rebecca Hallett
Past-President	John Huber
Treasurer	Kevin Barber
Editor (Journal)	Miriam Richards
Secretary	David Hunt

Agriculture and Agri-Food Canada
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E-mail: Huntd@agr.gc.ca
http://www.entsocont.com

Société d'entomologie du Québec

Président	Eric Lucas
Président-sortant	Jacques Brodeur
Vice-président	Daniel Cormier
Trésorier	Nancy Larocque
Rédacteur (Antennae)	Christine Jean
Secrétaire	Mireille Marcotte

1055, rue du PEPS, C.P. 3800
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E-mail: secretariat@seq.qc.ca
http://www.seq.qc.ca/

Acadian Entomological Society

President	Kenna MacKenzie
Vice-President	Michelle Larsen
Past President	John Sweeney
Treasurer	Suzanne Blatt
Secretary	Suzanne Blatt

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E-mail: suzanne.blatt@acadiau.ca
http://www.acadianes.org/index.html

Bulletin of the Entomological Society of Canada

Editor: Kevin Floate
Assistant Editor: Marj Smith

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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entsoc.can@bellnet.ca

The Entomological Society of Canada was founded in 1863 primarily to study, advance and promote entomology. It supports entomology through publications, meetings, advocacy and other activities.

Send correspondence to:
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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

Paul Coghlin

Each year, I receive dozens of requests regarding the identification and control of common insects such as aphids, flour beetles, cluster flies, caterpillars, demestid beetles, boxelder bugs, and ants. Occasionally, I receive more interesting queries. In the past, these have included maggots in margarine, wood-boring beetle larvae in furniture, and large numbers of adult scarab beetles on golf courses. The bodies of these latter critters were affecting the roll of balls on putting greens, and causing considerable angst among ardent golfers.

Even rarer, are the calls that I describe as 'way cool!'. One such call came from a Las Vegas casino that maintained a variety of African animals, including white tigers. They wanted to know if parasitic wasps commercially available to control pest flies would pose a danger to their animals or hotel patrons. More recently, I was asked to identify remnants of a beetle I had never seen before, which had been found in a crate shipped from the United States. On a hunch, I asked a colleague the name of the largest species of dung beetle in North America. *Dichotomius carolinus* was both the answer to my question, and identity of the specimen. My 'way cool' example in

(continued on p. 89)

Chaque année, je reçois des douzaines de demandes concernant l'identification et les méthodes de lutte contre certains insectes communs tels que les pucerons, les triboliums de la farine, les pollénies, les chenilles, les dermestes, les punaises et les fourmis. À l'occasion, il m'arrive également de recevoir des requêtes plus intéressantes. Par exemple, dans le passé il m'est arrivé de recevoir des demandes concernant des larves de mouches dans la margarine, des insectes perceurs de bois dans des meubles ainsi que des nombres importants de scarabées adultes sur les terrains de golf. Les corps de ces dernières créatures perturbaient le parcours de la balle sur la pelouse d'arrivée du vert de golf et causaient des grincements de dents chez les joueurs passionnés.

Plus rarement, je reçois des appels que je qualifie de 'super cool'! Un de ces appels m'est venu d'un casino de Las Vegas qui garde en captivité certains animaux d'Afrique, incluant des tigres blancs. Ils désiraient savoir si les guêpes parasites disponibles sur le marché pour contrôler les mouches nuisibles pouvaient poser un risque potentiel pour leur animaux ou pour les patrons de l'hôtel. Plus récemment, on m'a demandé d'identifier les restes d'un insecte que je n'avais jamais encore vu, qui avait été trouvé dans une caisse expédiée des États-Unis. Instinctivement, j'ai demandé à un collègue le nom de la plus grosse espèce de scarabée en amérique du nord. *Dichotomius carolinus* a été la réponse à ma question et m'a permis d'identifier le spécimen. Mon exemple 'super cool' de 2006 a été une araignée, la tégénaire géante (*Tegenaria duellica*). Je n'avais jamais entendu parlé d'elle jusqu'au jour où une dame m'a apporté un spécimen qu'elle avait capturé dans sa maison. Le jour suivant, elle s'est présentée avec un spécimen encore plus gros. Je ne peux dire ce qui m'a impressionné le plus : la taille de ces monstre ou le fait qu'une dame les ait collecté vivants à la main!

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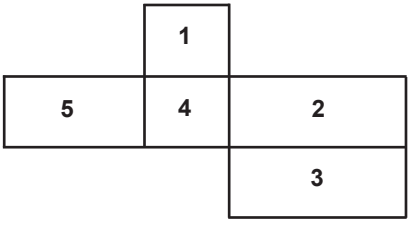

Images

On the spine: The mountain pine beetle, *Dendroctonus ponderosae* Hopk. (Curculionidae), an eruptive bark beetle that periodically kills large areas of pine forests in western North America. Photo: D. Linton.
Beneath the title: The white underwing, *Catocala relicta* Wlk. (Noctuidae), feeds on poplars, aspens, and willows. Photo: A. Carroll.
Photos on front cover:
1. Collecting bark beetles (Curculionidae) from a Lindgren funnel trap at Angstad Creek near Merritt, British Columbia. Photo: J. Smith.
2. *Leptomantispa pulchella* (Banks), photographed at Ojibway Prairie in Windsor, Ontario. This species is otherwise known in Canada only from the Okanagan Valley. Photo: S. Marshall.
3. A Cooley spruce gall adelgid, *Adelges cooleyi* (Gill.) (Adelgidae), parthenogenetic exulis with its eggs on Douglas-fir. Photo: B. Bains.
4. *Formica aserva* Forel (Formicidae), an aggressive ant that nests in large pieces of woody debris throughout Canada, carrying a pupa. Photo: R. Higgins.
5. Female wheat midge, *Sitodiplosis mosellana* (Géhin) (Cecidomyiidae). Photo: R. Lamb.
Back cover: *Tetragnatha viridis* Walck. (Tetragnathidae), the only bright green longjawed orb-weaving spider found in Canada, ranges from eastern Ontario and Nova Scotia south to the northern coast of the Gulf of Mexico. Photo: M. Larrivée.
Français à l'intérieur de la couverture avant

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