

The Entomological Society of Manitoba *Newsletter*



Volume 32 Number 2

ISSN 0836-5830

Spring/Summer, 2005

About the ESM Newsletter

The Entomological Society of Manitoba Newsletter is published three times per year. It is a forum whereby information can be disseminated to Society members. As such, all members are encouraged to contribute often. The Newsletter is interested in opinions, short articles, news of research projects, meeting announcements, workshops, courses and other events, requests for materials or information, news of personnel or visiting scientists, literature reviews or announcements and anything that may be of interest to ESM members.

Pat MacKay, Editor¹
Mahmood Iranpour, Editor²

Dept. of Entomology,
University of Manitoba
Winnipeg, Manitoba
R3T 2N2

¹Ph. (204) 474-9204
pa_mackay@umanitoba.ca

²Ph. (204) 474-6994
iranpour@ms.umanitoba.ca

Editors' Comments

At time of writing, it's mid-June, and finally it's summertime! And the insects are out in force! The trees are full of aphids and caterpillars, the bushes are full of mosquitoes with more to come given the water lying everywhere and the now-warm temperatures. Ah Manitoba!

This spring/summer issue is full of things for Manitoba entomologists: introductions of new members (4 items), news of former members (2 items), reports of things members did (4 items), notices of things members will do (3 items). Please take particular notice of details about the ESM Annual Meeting. The date is October 21 & 22 and the first call for submission of papers is a tear-off at the end of this Newsletter. Put the date on your calendar and send in your titles.

Finally, a reminder: send us your items for the next Newsletter. Just a short email or a phone call or voice mail message is enough to get us going – we'll do the rest. We're sure there are lots of entomological excursions planned for the summer. Let us know about them, and we'll tell everyone else about it in the fall issue in September/October.

Pat MacKay & Mahmood Iranpour

From the President's Point of View

Greetings from the head bug.

One of the difficulties in being a head bug is that no one tells you that it's not actually easy to come up with a little blurb for the newsletter. I already used up the "soapbox" gambit, so I need to find something new...



I suppose it's a little early, but it's a reasonable time to start thinking about meetings. Back in March of this year, I was fortunate enough to attend the Entomological Society of America - North Central Branch meeting at Purdue University in West Lafayette, Indiana. Why is this relevant? Well, for a couple of reasons. The Entomological Society of Manitoba is co-hosting this event in 2007 and I thought it best to explain a little of the structure of the meeting.

The North Central Branch is comprised of a region of the US that covers from Michigan west to North Dakota and from Kentucky up to Manitoba, a portion of Ontario and Nunavut. That's a pretty substantial geographic area and the attendance at this

meeting is comparable to a larger ESC meeting in number of attendees. The range of topics is remarkably varied and much more in depth than the preconceived reputation of corn and soybeans would lead one to believe. Stored products and urban entomology are well represented.

Agricultural entomology is a huge area of focus, though I admit to some predisposition to finding that useful. As with any meeting, graduate students form a substantial portion of the attendance and are critical to the success of the meeting.

The local arrangements co-chairs, Paul Fields and I are busy getting ready for the meeting and would like to ask for volunteers at some point. If you'd like to volunteer rather than be asked, please feel free to contact Paul or myself. We are expecting the meeting to be about the same size as the last ESC meeting held in Winnipeg in 2002. The US ESA members I spoke with are very excited about this meeting and hope it is a great success. They see a grand opportunity to have a very exciting and perhaps somewhat out of the ordinary NCB meeting.

Shifting gears a bit, I believe in the last issue I mentioned that with the reorganization of Manitoba Agriculture, Food and Rural Initiatives (MAFRI or still MDA for the oldtimers) it was unclear on how the breakdown of responsibilities for John and me (and Rheal and David as well) would work out. The process is still ongoing to some degree but I can give a brief explanation of where the lines fall between John and me. I'll leave the bee stuff for an incoming president to elaborate on in the future.

The simplest view of how the breakdown

works is John can be viewed as a field crop entomologist and I cover off most of the rest. Unlike John who has a virtual army of scouts, farmers and industry representatives to feed him information on the larger crops, most of the work done on the other side is hands on as we do not have many sources of information outside of what we gather ourselves. You'll notice I say we and by that I do not mean John and me, rather I work with a plant pathologist quite closely (yes, hideous, I know). There is an active vegetable scouting/IPM program and I am involved in an aphid monitoring program in potatoes. Additional work in potatoes includes examining the impacts of potato flea beetles and comparisons of some economic thresholds; wireworm trapping for European species and general extension activities regarding potato insect pests. Those are my two main foci, but I also cover off the following areas: fruit crops, forages, special crops (buckwheat, hemp, medicinal and aromatic crops), greenhouse crops, shelterbelts, ornamental shrubs and trees, turf, household pests, medical and livestock entomology. Basically if it isn't traditional Manitoba field agriculture I'm your guy. It's pretty cool stuff but at times exceedingly

frustrating due to a lack of resources that the field crops folks typically have access to.

On a closing note and related to my "soapbox" comment I still feel the same way about the future of entomology. I have had discussions with the University of Manitoba on the topic and it is a period of "wait and see" for the immediate future. With respect to AAFC, well, at the time I was not aware of the closure of the Winnipeg station, so that's a bit up in the air as well. I'll endeavour to continue talks with those organizations and help out there where I can, but it's a long term battle.

Enjoy the summer. As I write this the second nice day of the summer is here and it's not even June yet. Ahem.

Brent Elliott
Entomologist
Crop Diversification Section
Soils and Crops Branch
Manitoba Agriculture, Food and Rural
Initiatives
&
President, Entomological Society of
Manitoba

NEW STUDENTS IN ENTOMOLOGY AT U OF M

Suresh Desai

I did my Bachelors in Agriculture at College of Agriculture, Raichur, Karnataka, India in 2000 at the University of Agricultural Sciences, Dharwad. In 2002 I completed my M.Sc (Agri) in Agricultural Entomology at Tamil Nadu Agricultural University, Coimbatore. My master's research was titled "Mutualistic relationship between Bees and Coconut palm". Later, in 2003, I joined the Project Directorate of Biological Control, (ICAR) Bangalore as Senior Research Fellow. In 2004 I was enrolled as a PhD candidate in Entomology at University of Agricultural Sciences, Bangalore prior to joining Dr. Rob Currie's Bee Lab, University of Manitoba as PhD student in January 2005. My PhD thesis work is on thermoregulation, grooming behavior and viruses in honey bees in relation to *Varroa destructor*. I am also interested in pollination, stingless bees and sociogenomics. My experiences at University of Manitoba will be of great benefit in helping to develop the bee-keeping industry in India.

E-Mail: suresh_desai@rediffmail.com
umdesai2@cc.umanitoba.ca



Paul Kozak

Sometime during my undergraduate degree in zoology at the University of Manitoba, I was forced against my will to take Introductory Invertebrate Zoology as a requirement for my degree. I ended up enjoying the course, but decided that the few hours dedicated to insects was not enough. So I enrolled in Introductory Entomology and since then I can't imagine studying an animal that doesn't have six legs. After completing my undergraduate degree I spent some time overseas where I had many encounters with insects. Most of those encounters were positive. I am now working on my Masters degree at the University of Manitoba under the supervision of Dr. Currie. I am studying how aspects of the honey bees' winter environment can be modified to control varroa mites.



Andrea Patenaude

My entomological career began unofficially sometime around the age of eight. Fascinated by the hoards of ladybeetles that would just "appear" on the sands of Delta Beach, and I spent many hours undertaking the serious task of ladybug mansion construction. Since then, I have gotten a little more "official" about things and have recently begun graduate studies with Rob Roughley in the University of Manitoba's Entomology Department.



Originally from Manitoba, I completed my undergraduate degree in Conservation Biology at the University of Alberta. There, I got very interested in pollination while spending a summer frolicking in the deserts of Utah learning about the yucca moth-yucca system. Upon returning to Winnipeg, I spent a couple of years working for a wildlife consulting company, but my desire to link my interests in pollination and in conservation eventually led me back to academia...and ultimately, to entomology! For my Master's project, I will be looking at wild bee diversity (I like to call it bee-o-diversity) and pollination in mixed grass and tall grass prairie habitats of southern Manitoba. I will also be trying to fill Kathleen Ryan's shoes as the Coordinator of the Youth Encouragement Committee and look forward to meeting all of you ESM youth encouragers!

Andrea Thomson

I graduated from the University of Winnipeg in 2004 with a Bachelor of Science, in Biology. While attending the U of W, I worked a variety of summer jobs which eventually led me to mosquito work. I started as an interpreter at Oak Hammock Marsh, where my specialty was 'aquatic critter dipping', worked as a field assistant in Elk Island National Park on aquatic insects in lentic habitats, and one incredible summer on a dolphin trainer internship on the Big Island of Hawaii – which had absolutely nothing to do with insects but was still pretty amazing. At last in 2003 my summer was spent working on the bugline with the City of Winnipeg and on the side on my undergraduate honours thesis on catch basins and mosquitoes. I started my Masters project officially in September 2004 and it will look at the distribution and abundance of West Nile virus vector mosquitoes in Winnipeg catch basins and evaluate the various control strategies. After my Masters is completed I hope to find a job doing research on urban pest management or anthropogenic impacts on aquatic insects.



PAST MEMBERS OF ESM

John Gruszka wins an award

John Gruszka received a Distinguished Agrologist Award from the Saskatchewan Institute of Agrologists, on 07 April 2005, in Saskatoon. John first worked with honey bees and Cam Jay in Africa in the early 70's, and then completed an M.Sc., also on bees and with Cam, in the Department of Entomology at the University of Manitoba, in the late 70's. In 1979, John moved to Saskatchewan to take up a position as provincial apiculturalist, a position he still holds today. As provincial apiculturalist, John has made major contributions to the bee keeping industry not only in Saskatchewan but throughout Canada. He was instrumental in developing techniques for successful overwintering of bees in the Prairies, which freed beekeepers from the expense of having to buy packages of bees every spring. He has also been a major contributor to the industry's understanding of and management of tracheal and varroa mites, two pests of honey bees which arrived in Canada in the late 80's and early 90's. He is also a committed beekeeper himself, with 44 hives currently. Congratulations to John Gruszka from his old friends and colleagues in the Entomological Society of Manitoba. (Source: Keitha Clark, Rural Roots)

Palaniswamy Pachagounder visits Winnipeg.

Many of you will remember Swamy who worked as a Research Scientist at the Cereal Research Centre in Winnipeg, for about a decade ending in 1995. During that time Swamy worked on insect - plant interactions, mostly with flea beetles on canola. He left Winnipeg to work with the Food and Agriculture Organization, an agency of the United Nations, first on integrated pest management for rice, stationed in Dhaka, Bangladesh. When that project was complete he took over the responsibility of administering an integrated pest management project for cotton in Asia and the Indian sub-continent, stationed in Hyderabad, India. The work consisted of setting up training programs for local agricultural advisors who fanned out across the countries in the area, and trained farmers to identify pests and beneficial insects, and effectively exploit integrated pest management. After 8.5 years on these projects he has retired. He plans to settle near Coimbatore, in Tamil Nadu State in India with his wife Raji. Swamy and Raji were in Winnipeg briefly in April to visit their son, and on April 15, found time to drop in on Bob Lamb and Pat MacKay. They will return to India after a few months in North America, visiting their three children and being with their daughter in California for the birth of their first grandchild. Swamy asked that greetings go out to all his friends in the Entomological Society of Manitoba, along with an invitation to visit him when he settles in India.



Swamy & Raji Pachagounder in Winnipeg in April 2005.



Social Butterflies Corner

On Friday April 8, 2005 the ESM Social Committee hosted a 'New Members Mini-Golf Night'. The event took place at The Golf Dome, 1205 Wilkes Ave in Winnipeg. Snacks and pop were provided free of charge to give the players energy for golf. There was also a cash bar on hand if your golf game needed more than a little energy! 17 people were in attendance. Teams were selected using traditional sampling methodology (i.e. random numbers from a paper bag). Players had to demonstrate their 'skills' to earn tickets on the great prizes to be won in the silent auction. There was also a ticket raffle that participants could purchase tickets to win two large prize-packages which included \$50 gift certificates for The KEG restaurant.

We were very pleased to welcome two new members at the Golf night – Lars Andreassen, and Alicia Leroux. Following mini golf, and the raffle draws, members had an opportunity to mingle and display 'skills' on the pool tables. We would also like to thank everyone that came out and hope to see everyone at the next ESM event. Please watch your e-mail for information regarding upcoming events! As always please feel free to contact us with ideas or suggestions for interesting social activities.

We would like to gratefully acknowledge and thank the following sponsors:

- Labtronics
- Bee Maid
- Boston Pizza
- R & C Lafreniere
- McDonald's
- Fabutan
- Roger's Video

Your Social Committee Members:

*Rhéal Lafrenière
Provincial Apiarist
Manitoba Agriculture,
Food and Rural Initiatives
204-545 University Cres.
Winnipeg, Manitoba
PH. (204) 945-4825
FX. (204) 945-4327
Rlafrenier@gov.mb.ca*

*Sheila Wolfe
Entomology Technician
Agriculture and Agri-Food Canada
Cereal Research Centre
195 Dajoe Road R3T 2M9
Winnipeg, Manitoba
Telephone: 204-983-1450
Facsimile/Telecopieur: 204-983-4604
E: swolfe@agr.gc.ca*

Last Friday of the Month

The Department of Entomology at the University of Manitoba holds an important entomological social event on a monthly basis. On the last Friday of every month, the faculty members in the Department take the graduate students, and various other hangers-on, for beer and nachos. The venue is usually the Pony Corral on Pembina Highway in Fort Richmond. The time of assembly is usually 4:00pm. Time of dispersal is highly variable. Department Head Neil Holliday says that others are always welcome to join in. In fact various members of Soil Science at U of M often have.

A word of warning though – the last Friday of the month, entomology-style, can be surprisingly flexible. Call Kathy in the Entomology Office (474 8077) to confirm the date and put your name on the list.



Last Friday of the month (moved in March/April to the last Friday of term, April 15 on the Pony Corral patio. Clockwise from left foreground: Terry Galloway, Rob Roughley, Paul Kozak, Scott McMahon, Dave Holder, Andrea Patenaude, Margaret ann Baker, Jashim Uddin, Suresh Desai, Lars Andreasson, Anita Stjernberg, Kathleen Ryan, Pat MacKay, Mahmood Iranpour, Andrea Thomson. (Photographer: Bob Lamb)

INCREDIBLE INSECTS at the Manitoba Children's Museum

In the last issue of the Newsletter we told you about the upcoming exhibit at the Children's Museum, put on by the Museum and the Department of Entomology at the University of Manitoba. Well, the show is over - it ran from March 05 to April 23 - and it was a HUGE success. It was also tonnes of fun.

The exhibit was staffed by Museum volunteers, and also, particularly at peak times, on the weekends and during school holidays, by volunteers organized by Kathleen Ryan, the Chair of the ESM Youth Encouragement Committee. Kathleen says that her volunteers included: Lars Andreasson, Lisa Capar,



Pat MacKay and friend with the giant Brazilian cockroaches. (Photograph by R. Lamb)

Suresh Desai, Sarah Fandych, Paul Fields, Bob Lamb, Alicia Leroux, Pat MacKay, Striramasarma Mohan, Andrea Patenaude, Kathleen Ryan, Kim Riley, Marj Smith, and Daryl Wright. Kathleen says that she “would like to thank all of the volunteers from the entomological community who were on hand to interpret the displays and answer questions.” She said that “we had a lot of positive feedback about your contributions both from museum staff and visitors. A few of the visitors are now aspiring to be entomologists when they grow up.”

Pat MacKay and Bob Lamb spent two afternoons staffing the exhibit and had a great time. Bob took a few photographs to prove it. It was fun to wander around the room and watch reactions to a Madagascar hissing cockroach in your hand, or a Vietnamese stick insect climbing up your arm to your shoulder. One very quiet, shy, young girl, perhaps 11 or 12 years old, was fascinated by but terrified of the cockroach at the beginning of the afternoon, but finally got up the nerve to touch the roach and then accept it in her hand. Well that was it for her – she spent the rest of the afternoon holding the roach (under supervision!) and offering it to other children to hold. She was there for a full three hours!

The exhibit included live insect such as the stick insects, the hissing roach, giant Brazilian roaches, an observation hive of honey bees, and a mealworm culture, as well as pinned insects from Manitoba and the tropics, and a number of murals on the walls illustrating insect anatomy, life cycles and other information, as well as an entomologically oriented play space for the very young visitors. The exhibit sparked lots of interest. The Museum expected it to draw about 20,000 visitors over the six week period and had no problem achieving their goal.



Huey Warren with a Vietnamese stick insect. Huey plans to start his own insect collection. (Photograph by R. Lamb)

IDENTIFYING INSECTS
A Manitoba Naturalists' Society
Workshop offered by Pat MacKay and
Bob Lamb

On Wednesday, April 20, 2005, Pat and Bob offered a 2-hour evening workshop introducing insects to 20 members of the Manitoba Naturalists' Society. The goal was to show them the adults of some of the insect orders commonly seen in Manitoba. People were provided with their own microscopes and worked in pairs on sets of five unit trays of pinned insects from 13 orders, with between one and five representatives from each order. Participants were provided with lab handouts describing the juvenile stages and the ecological roles of each one. Some of the participants had no prior knowledge of insects and spent their time diligently working through the material (Don't you wish undergraduates would do the same!). Other registrants already had fairly extensive knowledge of insects and so also had time to make use of the supplemental material available. This included a set of six unit trays of Coleoptera from a wide range of families, two drawers of Manitoban Lepidoptera, and a drawer of Coccinellidae, each with the appropriate keys

or field guides. In addition to the dried and pinned material, Pat and Bob also provided live material including the ever impressive Madagascar hissing cockroach and the Vietnamese stick insect, both of which were as well received by this older crowd as they usually are by the 12-and-unders.



MNS members Janet & Mile Rendulic were outstanding entomology students. (Photograph by Jane E. Curtis)

The Manitoba Naturalists' Society offers this series of workshops in the late winter and early spring every year. Topics range widely and attendance ranges up to a maximum of about 30 registrants. Last year Rob Roughley offered one on lepidopteran caterpillars in this series. Any suggestions for future offerings we might make to continue this connection with the Manitoba Naturalists?



Bob Lamb consults with workshop participants in the U of M entomology classroom (Photograph by Jane E. Curtis)

Speaking of the Manitoba Naturalists' Society.....

The Manitoba Naturalists' Society (MNS) is celebrating its 85th anniversary this year, and the celebrations currently planned involve a significant amount of Entomology! So mark your calendars and get ready to participate. The MNS indoor program, which is a series of Monday night lectures held at the FrancoManitoban Cultural Centre, begins its 2005/2006 season at 7:30pm on October 17, 2005. The opening speaker is Neil Holliday of the Department of Entomology at the University of Manitoba (and ESM Past-Past President as well as the Chair of this year's Scientific Program Committee). Neil will be speaking on "Norman Criddle: Pioneer Entomologist of Manitoba". Norman Criddle was a very fine Naturalist as well as an Entomologist, and Neil may be making some connections between the two. Then, a week later, on Monday October 24, 2005 Pat MacKay and Bob Lamb give the second lecture in the series. This one will be given in conjunction with the Winnipeg Art Gallery (WAG) and held at the WAG. From September 21, 2005 to January 08, 2006, the WAG will be presenting an exhibit entitled "Bug City". The exhibit will feature local artists, as well as national and international artists, who use some aspect of bugs (mostly, but not always, interpreted as insects) in their work. Media will include the conventional ones as well as other materials such as fabric or film. On October 24, at 7:30pm in the Muriel Richardson Auditorium, Pat and Bob will give a lecture entitled "The MNS presents: Secrets from the Bug World" which will be a light-hearted look at the importance of insects to humans in particular and global ecosystems in general. After their presentation, coffee and tea will be available in Eckhardt Hall, and people will also be able to visit the Bug City exhibit in the galleries. Please note that the ESM Annual Meeting is in between these two events, on Friday and Saturday, October 21 and 22, 2005. October will be a great month for Entomology!

MEETING ANNOUNCEMENTS*

Great Lakes Odonata Meeting

Clearwater Lake Lodge (near Emo), Ontario, Canada, 13-17 July, 2005

www.rainyriverfieldnaturalists.org

Registration forms are available from Terry Galloway, Department of Entomology, University of Manitoba, Winnipeg, MB, R3T 2N2 (204 474 6024)

9th International Conference of the Orthopterists' Society

Canmore, Alberta, Canada, 14-19 August 2005

Contact: Dan Johnson, dan.johnson@uleth.ca

<http://www.orthoptera2005.org>

International Symposium on Biological Control of Arthropods

Davos, Switzerland, 12-16 September 2005

<http://www.cabi-bioscience.ch/ISBCA-DAVOS-2005/>

Entomological Society of Manitoba Meeting

FWI & U of M, Winnipeg Manitoba, 21 & 22 October 2005

Contact: N.J. Holliday, Neil_Holliday@umanitoba.ca

Joint Annual Meeting of the Entomological Societies of Canada and Alberta

Canmore, Alberta, 2-5 November, 2005

Contact: D.Langor & F. Sperling, DLangor@NRCan.gc.ca , felix.sperling@ualberta.ca

<http://www.biology.ualberta.ca/courses.hp/esa/esa.htm>

52nd Annual Meeting of the Entomological Society of America

Fort Lauderdale, USA, 6-9 November, 2005

http://www.entsoc.org/annual_meeting/2005/index.htm

*If you have a meeting you would like listed in the next ESM Newsletter, contact the editors with the details by early September 2005

ESM EXECUTIVE 2004

POSITION	PERSON	EMAIL ADDRESS
President	Brent Elliott	BElliott@gov.mb.ca
Past President	John Gavloski	jgavlosk@gov.mb.ca
President-Elect	Rheal Lafreniere	rlafrenier@gov.mb.ca
Representative to ESC	Patricia MacKay	pa_mackay@umanitoba.ca
Member-at-Large	Lisa Baspaly	lisa_baspaly@phac-aspc.gc.ca
Secretary	Noel White	nwhite@agr.gc.ca
Treasurer	Ian Wise	iwise@agr.gc.ca
Proceedings Editor	Terry Galloway	terry_galloway@umanitoba.ca

ESM COMMITTEE CHAIRS 2004

Endowment Fund	Marjorie Smith	msmith@agr.gc.ca
Finance	Marjorie Smith	msmith@agr.gc.ca
Scientific Program	Neil Holliday	neil_holiday@umanitoba.ca
Newsletter	Patricia MacKay	pa_mackay@umanitoba.ca
	Mahmood Iranpour	iranpour@ms.umanitoba.ca
Youth Encouragement	Andrea Patenaude	ampatenaude@yahoo.com
Social	Rheal Lafreniere	rlafrenier@gov.mb.ca
	Sheila Wolfe	swolfe@agr.gc.ca
Archives	Rob Roughley	rob_roughley@umanitoba.ca
Scholarships & Awards	Richard Westwood	richard.westwood@uwinnipeg.ca
Fund-Raising	Joel Gosselin	jgosselin@viceroystributors.ca
Nominating	John Gavloski	jgavlosk@gov.mb.ca
Membership	Brent Elliott	BElliott@gov.mb.ca
Scrutineer	Colin Demianyk	cdemianyk@agr.gc.ca
Web Page	Mahmood Iranpour	iranpour@ms.umanitoba.ca

**The 61st Annual Meeting of the Entomological Society of Manitoba
21 and 22 October 2005**

Biological Control in the 21st Century

Program Outline:

Friday 21 October: Freshwater Institute Large Seminar Room

Morning

Opening Ceremonies

Plenary Speaker: Dr James Hagler, USDA Phoenix, Topic: The role of predators in biological control

Afternoon

Presented Papers including President's Prize competition

Poster session

Evening

Banquet, The University Club, University of Manitoba

Saturday 22 October: Room 219, Animal Science/Entomology Building, University of Manitoba

Morning

Symposium on biological control in the 21st Century

Speakers: Dr Mahmood Iranpour, Biological Control of Tabanidae

Dr Neil Holliday, Biological control of root maggots in canola

Two more TBA

Afternoon

Business Meeting

Evening

Meet the speakers reception at the MacKay/Lambs

CALL FOR PAPER TITLES

If possible, please go to the ESM Website at <http://home.cc.umanitoba.ca/~fieldspg/meet.html> and follow the links to the 2005 Annual General Meeting page, download the form below as a Word file, and complete it and email it to Neil_Holliday@UManitoba.CA

If you are unable to access or use the Word file, please complete the form below and mail or fax to

N. J. Holliday, Chair, Scientific Program Committee
 Department of Entomology, University of Manitoba, Winnipeg, Manitoba R3T 2N2
 Telephone: 204-474-6020, Fax: 204-474-7628

SUBMITTED PAPER/POSTER REPLY FORM

Authors Names:		
Affiliation:		
Telephone number:	Fax number:	
Email address:		
Title of paper:		
Form of submission (check one) :	12 minute oral presentation:	<input type="checkbox"/>
	12 minute oral student prize paper*:	<input type="checkbox"/>
	Poster paper:	<input type="checkbox"/>
Media requirements: (check all required):	Powerpoint projector	<input type="checkbox"/>
	35 mm slide projector:	<input type="checkbox"/>
	Overhead projector:	<input type="checkbox"/>

- Please submit your title by **1 August 2005**
- You should receive a confirmation email that your submission has been received and accepted.
- An abstract of all accepted papers will be required by **1 October 2005**
- * Student prize competitors must be registered at the ESM Annual Meeting and must be full time students, or have student status in the Entomological Society of Manitoba, Entomological Society of Canada, or another regional society of Canada. Student prize evaluation criteria are at <http://home.cc.umanitoba.ca/%7Efieldspg/pdf/studeval.pdf>