

# THE ESO Newsletter

May 2007

Volume 12, Issue 1

2006-2007 OFFICERS OF THE ENTOMOLOGICAL SOCIETY OF ONTARIO

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## ESO President's Message:

Greetings to all Entomological Society of Ontario members. It's unbelievable that six months of my term as President have already flown by. Unofficially, bug season is here. On my way back from the Interim Board of Directors Meeting in Guelph on Friday, 27 April, my windshield was plastered with the unidentifiable remains of many bugs. The "bug deflector" on the front of my van is obviously for decorative purposes only.

I wanted to let you know about some of the significant developments which are occurring in the Society.

The Journal of the Entomological Society of Ontario is now online. If you check out our website under publications (<http://www.entsocont.com/pub.htm>), you will find that the articles in the last several issues of JESO are now available electronically in PDF format when you click on the cover page of each journal volume. We also plan to scan the articles from previous issues and mount them on the website. This will make the papers you publish(ed) in JESO readily and easily available to everyone with access to the Internet. Thanks go out to Barry Lyons, webmaster, and Miriam Richards, editor of JESO, for undertaking this important project. It should greatly improve the visibility and reputation of our Journal. While on the subject of JESO, the next volume will be a special issue in tribute to David Pengelly, edited by Steve Marshall. There have been so many papers submitted for publication in this special issue that the Board of Directors has decided to split it into two volumes of about 110 pages each. Consequently, both Volume 137, 2006 and Volume 138, 2007 will be published by the end of the year.

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This will mean that JESO will finally be published on time which has been the goal of our journal editors for many years. Now that the volume year is the same as the publication year, we need to keep on a regular publication schedule. It's up to you! We need manuscripts for Volume 139, 2008. Submit them as soon as you can to ensure that we can stay on schedule. We are proud of our Society's Journal with its 136-year history. Our editor and others have worked hard to improve and modernize the Journal - please support it.


The Annual General Meeting held in Guelph on 27-29 October, 2006 was a great success with 83 participants of which 39 were students. The Annual General Meeting has definitely become an attractive event for students to present their work, gain valuable experience and interact with fellow entomologists. To encourage this to continue, the organizing committee of the 2006 AGM has requested that the profit of about \$1400 from the meeting be allocated to extra travel grants for students to attend the 2007 Annual General Meeting in Sault Ste Marie. Sault Ste Marie is 550 (Windsor) to 940 (Kingston) km by road from most of you. The Awards Committee (Hannah Fraser and Margaret Pickles) are going to decide how best to distribute these funds. These grants, as well as our usual two Student Travel Awards (pg 15 of the Newsletter), hopefully will assist many of you to come to the "Soo". Our student representative, Aynsley Thielman, will keep you posted on developments. Please provide her with an up-to-date e-mail address if you are not already receiving regular messages from her regarding job opportunities in Entomology. Planning for the 2007 meeting is progressing well. See the invitation in this newsletter for further details.

The Public Education Committee (Hannah and Margaret) was very busy recently organizing a display for the Insect Fair in Mississauga on Sunday, 29 April. We'll update you on this event in the fall newsletter.

I would like to take this opportunity to thank all of our directors, the officers of the Society and the many volunteers behind the scenes for their hard work and dedication. Everyone has very busy schedules and it is greatly appreciated that they freely give their time voluntarily. Have a great summer and good insect hunting.

Blair Helson





Natural Resources Canada	Ressources naturelles Canada
Canadian Forest Service	Service canadien des forêts

Sault Ste. Marie

**144<sup>th</sup> Annual Meeting of the  
Entomological Society of Ontario**

**ENTOMOLOGY AT THE BORDER:  
BRIDGING THE GAP**

26-28 October 2007

Great Lakes Forestry Centre  
&  
Holiday Inn

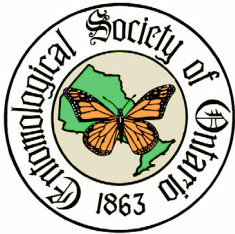
HIGHLIGHTS

ESO mixer  
Symposium with Guest Speakers  
Student Papers and Posters for President's Prizes  
Undergraduate and Graduate Student Travel Awards  
Submitted Papers and Posters  
Banquet with entertaining after-dinner Speaker

For more information and  
registration procedures  
please visit the ESO website  
(<http://www.entsocont.com/>)  
and click on 2007 Annual Meeting

or

contact the ESO2007 registration committee  
[knystrom@nrcan.gc.ca](mailto:knystrom@nrcan.gc.ca)



# 2007 ELECTION CANDIDATES

## REGULAR BALLOT



All fellows, regular and student members of the ESO who have renewed their membership in 2005 or 2006 will have received the ESO election ballot and return envelope addressed to the ESO Secretary in March. The annual ESO election ballot lists all candidates running for an elected position on the ESO Board. This year's election ballot included two candidates for president-elect, three candidates for the two director positions, and two candidates for student representative.

*The following are the biographies supplied by the candidates for the positions of President-Elect, Director, and Student Representative.*

### **President-Elect Candidates**

#### **Cynthia Scott-Dupree**

Cynthia Scott-Dupree is a Professor in the Department of Environmental Biology at the University of Guelph and has been a faculty member there since 1986. She received her Master of Pest Management (1983) and her Ph.D. (1986) from the Dept. of Biological Sciences at Simon Fraser University under the supervision of Dr. Mark Winston. Cynthia's M.P.M. research dealt with the use of pheromones for the monitoring and control of moth pests in apicultural situations. Her Ph.D. research focused on the pollination activities of honey bees and native bee pollinators in orchard systems in the Okanagan Valley of British Columbia.

Her research interests include integrated management of insect crop pests using environmentally compatible control methods, resistance management, and the impact of agro-ecosystems on non-target organisms, including beneficial insects such as honey bees, bumble bees, native bees and natural enemies of insect pests. Dr. Scott-Dupree is also interested in alternative control methods for honey bee disease and pests.

Cynthia also is involved with teaching 2 undergraduate courses – Biology of Plant Pests and Applied Entomology and 2 graduate courses Effective Scientific Communication and Insect Pest Management. Dr. Scott-Dupree has supervised 20 graduate students, has edited 3 books, and published 30 refereed scientific papers, 27 refereed proceedings papers, 52 technical reports and 28 extension publications.

Born and raised in western Canada, Cynthia became acquainted with apiculture and agriculture through family beekeeping and farming operations. She is keenly aware of the importance of entomology/apiculture and agriculture to the Canada economy and endeavours to relay this to others through her research, teaching and extension activities. Cynthia's

been a member of the ESO Board of Directors and the Executive in past years and her interest in the Presidency of ESO now focuses on her desire to see the society continue to flourish as it has done in the past 10 years by maintaining the high quality of the journal, annual meetings, and continued recruitment of new and enthusiastic entomologists from all walks of life.

#### **Les Shipp**

Les Shipp obtained his Honours B.Sc. (Fisheries/Wildlife) in 1975 and his M.Sc. (Entomology) in 1977 at the University of Guelph. He then attended Iowa State University where he received his Ph.D. (Entomology) in 1981. Les joined Agriculture Canada as a Research Scientist at the Lethbridge Research Centre in southern Alberta in 1980. He spent 6 years in Lethbridge studying the ecology and pest management of black flies that attack livestock. In 1987, he transferred to the Greenhouse and Processing Crops Research Centre at Harrow, Ontario to work in greenhouse pest management. His research emphasis is on the development of non-chemical IPM strategies for pests of greenhouse vegetable and ornamental crops. He is an Associate Graduate Faculty Member at the University of Guelph and Adjunct Professor at the University of Windsor.

Les is a member of the Entomological Societies of Ontario, Canada and America, and the International Organization of Biological Control. He was a member of the 1981 organizing committee for the joint annual meeting of the Entomological Societies of Canada and Alberta. He served on the Editorial Board for the Journal of Medical Entomology (1995-99) as the representative for Section C (Biological Control) of the ESA. He is also a member of the Norman R. Dubois Memorial Scholarship Committee, ESA (2003-06). He was co-convenor of the IOBC/Nearctic Regional Section "Greenhouse, Nursery and Ornamental Landscape

IPM Working Group" from 1999-2005. Les was a Member-at-Large (2004-06) on the Governing Board of the IOBC/NRS and is currently President-elect. He has served as a student judge at the ESO and ESA meetings, and believes strongly in promoting and mentoring our students and colleagues beginning their careers.

If elected President-elect, Les would be honoured to be an ambassador for the Entomological Society of Ontario promoting the important work of the Society and to encourage increased mentoring of students, the future foundation of our Society.

### **Director Candidates**

#### **Hume Douglas**

My recent involvement in basic research and applied entomology at four Ontario centres of entomological study makes me well suited to helping lead the ESO. I work as a quarantine entomologist with the Canadian Food Inspection Agency at the Central Experimental Farm in Ottawa. My work is aimed at preventing unwanted introductions of insects by humans. This is achieved through examining intercepted insects and studying insect faunas in the field.

I recently completed my PhD at Carleton University, where I researched the phylogeny of click beetles (Elateridae). I worked on species level systematics of beetles during my MSc research at York University. During research contracts at Trent University and throughout my graduate school career, I have also been involved in conservation oriented ecological studies of beetles, bees and flies.

As a member of several organizational steering committees, I have administrative skills that would make me an effective leader at the ESO. This experience includes organizing a biology conference, which is directly relevant working for the ESO. My experience as an ESO member as well as of the Entomological Society of Canada, the Entomological Society of America and the Coleopterists Society, has made aware of the issues facing entomological professional organizations in general. Membership in these other organizations also provides me with links to more people who are tackling the same issues.

I first became a member of the ESO in 1998. As an entomologist, I have benefited from this organization and I would enjoy becoming more involved in promoting entomology and entomological education in Ontario. Please consider electing me as a Director of the ESO.

#### **Jose L. Fernandez Triana**

I received my BSc (Biology) and PhD (Plant Protection) from Cuban universities, and my MSc (Agroecology) in Spain. In all cases my research was focused on Entomology. I started to collect insects as a 4 year-old boy, but became devoted to entomology seriously since I was 15 years old. In Cuba I worked for 12 years as a university assistant professor and researcher, in topics such as: taxonomy of parasitic wasps, integrated pest management and conservation biology. I am also a member of the International Society of Hymenopterists, Sigma Xi, Cuban Academy of Sciences, Cuban Zoological Society, etc.

In April 2006 I came to Ottawa, and three days after my arrival I started to work as a volunteer at the Canadian National Collection (CNC), thanks to the encouragement and support of Henri Goulet and Lubomir Masner. For six months I was working elsewhere to sustain my family, but I always kept my free time to go to the CNC. And with the money of my first payment I bought Steve Marshall's book and paid for my membership to the Entomological Society of Canada (instead of preparing for winter; fortunately it has been mild!). In October 2006 I managed to attend the 143rd Annual Meeting of the Entomological Society of Ontario thanks to the help and generosity of friends like Steve Marshall, John Huber and Patrice Bouchard. There I gave a small presentation, enjoyed a lot talking with colleagues during the meeting and even got a job as entomologist with the University of Guelph! Since then I have been working as a research assistant for the Department of Integrative Biology, and my present research is related to taxonomy/ecology of Canadian Microgastrinae wasps as well as supporting some biodiversity inventories.

I do not think that I deserve the honour of being nominated to one of the ESO officer positions, and my only presentation letter is a passionate love for insects, and a desire to keep learning and working hard for the future of Canadian Entomology.

#### **Kathleen Ryan**

I am a relatively new member of the ESO, joining when I arrived in Ontario a year ago to start a PhD in the Faculty of Forestry at the University of Toronto. I am currently studying the ecology of *Sirex noctilio*, a recently arrived invasive woodborer. I received a MSc in Entomology from the University of Manitoba (2005), where I studied the effects of plantation forestry on insect and plant communities, and a BSc in Geography from the University of Winnipeg (2003).

I have been involved with both provincial and national Entomological Societies – I was on the Membership



## ***Directors continued***

committee of Entomological Society of Canada, and I was the chair of the Youth Encouragement and Public Education committee for the Entomological Society of Manitoba (2003 – 2005). During my time with the Public Education committee, I had the opportunity to speak about insects at a number of schools and public events. I have also worked with several organizations delivering science, biology and environmental awareness programs, most recently for the Ontario Forestry Association. If elected as a director of ESO I would welcome the chance to continue to promote public education in entomology.

## ***Student Representative Candidates***

### **Jane Allison**

My name is Jane Allison and I am a candidate for the student representative on the board of the ESO. I am a first year Masters student at Carleton University working with Dr. Naomi Cappuccino and Dr. Peter Mason. During my undergraduate work I became fascinated with the study of insects and their relationships with their host plants, particularly introduced species. Most recently, I developed and concluded a study on the host range of an exotic pest, the leek moth. My current research focuses on the characteristics associated with successfully invasive insects and the host parasitoid associations between novel and native species.

If elected as your student representative my job will be to act as a voice for all student members when decisions are made at board meetings. These decisions cover issues ranging from questions about electronic publishing to deciding how many student awards to give out at the annual meetings. It is important that the views and opinions of entomology students are presented to the board and your input will be essential. Our previous representative, Laura Timms, developed a student page for the ESO website and I will endeavour to continue and expand this initiative.

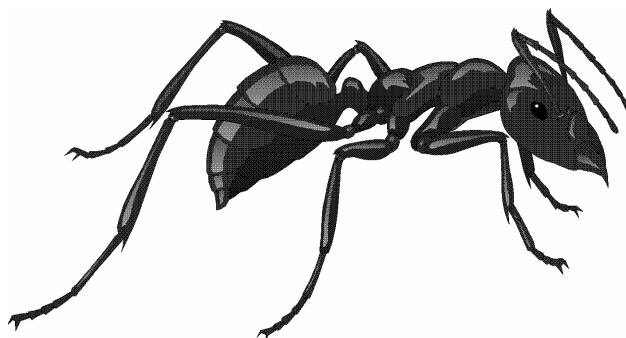
### **Jen Perry**

I am mid-way through the second year of my PhD in Dr. Locke Rowe's lab at the University of Toronto. I study sexual conflict and mating behaviour in a ladybird beetle (the two-spot ladybird, *Adalia bipunctata*) and in water striders.

My education has taken me on a circuitous route around the country. I'm originally from Cape Breton, Nova Scotia, and I received my B.Sc. in environmental biology from the University of Alberta. My honours undergraduate project looked at indirect interactions between yucca moths and wood ants in northern Montana, under the supervision of Dr. John Addicott. My Masters degree is from Simon Fraser University, where I worked with Dr. Bernie Roitberg to study egg-laying behaviours in another ladybird beetle, the multi-spotted Asian ladybird, *Harmonia axyridis*.

I served as a director of the Entomological Society of British Columbia from 2004-2006, and I have been the typesetter for the Society's journal for the past three years. I've been a member of the student committee for the Entomological Society of Canada for three years now. I have given several presentations at the ESBC and ESC annual meetings. I received the student presentation award at three of these meetings, and also an honourable mention at the ESC meeting last fall in Montréal. I am currently helping to organize the upcoming meeting of the Canadian Society for Ecology and Evolution, being held at the University of Toronto May 17-20. (It promises to be a great meeting -- please visit <http://www.eeb.utoronto.ca/CSEE/>)

I think entomological societies are a wonderful resource for all bug-minded people. If elected, I would like to facilitate and encourage student participation, and to highlight student achievements such as completed theses on entomological topics in Ontario



# INTEGRATIVE TAXONOMY OF THE BEE SUBGENUS *DIALICTUS* (HALICTIDAE: *LASIOGLOSSUM*).

Bees play a vital role in most terrestrial ecosystems as pollinators of wildflowers and agricultural crops (Buchmann and Nabhan, 1996). Unfortunately, mounting evidence suggests that bees are in decline and the pollination services they provide are in deficit (Biesmeijer *et al.*, 2006; Steffan-Dewenter *et al.*, 2006). Focus is often given to the recent decline of the honey bee *Apis mellifera* L. (Watanabe, 1994) but native bees are also at risk (Biesmeijer *et al.*, 2006). Beyond their role as pollinators, bees have been shown to be particularly sensitive to ecosystem change. Such sensitivity makes them effective 'miner's canaries' of ecosystem health (Zayed *et al.*, 2004). However, our knowledge of bee species richness is poor, largely because there are so many species (over 800 in Canada alone) with many of them extremely difficult to identify. A vital first step for bee conservation and their application to ecosystem monitoring is to identify and describe them.

Identifying and describing biodiversity has long been the purview of taxonomists able to recognize subtle morphological differences between species. Recently, a new method, DNA barcoding, has been offered that promises to speed taxonomic progress and allow identification of species even without taxonomic expertise (Hebert *et al.*, 2003a). DNA barcoding employs a short strand of a standard gene to identify species. A 648-bp fragment of the mitochondrial cytochrome *c* oxidase subunit I (COI) is the standard for animals. DNA barcoding has incited much controversy in the taxonomic community and has been equally lauded and denounced in the literature (Hebert and Gregory, 2005; Ebach and Holdrege, 2005; Schindel and Miller, 2005; Will *et al.*, 2005).

Several recent papers have criticized the accuracy of identifications by DNA barcoding and have pointed out the potential for high error rates (Hickerson *et al.*, 2006; Meier *et al.*, 2006; Meyer and Paulay, 2005; Will and Rubinoff, 2004). Other publications have suggested high rates of success in identification and the ability to recognize new species (Hajababaei *et al.*, 2006; Hebert *et al.*, 2004a, b; Hebert *et al.*, 2003b). Arguments over the advantages of morphological versus molecular based taxonomy are moot. The two strategies should be complementary. The best and most defensible strategy is to combine both types of data as a total evidence analysis in what has been called 'integrative taxonomy' (Dayrat, 2005).



The *Lasioglossum rohwarei* image appears courtesy of Jason Gibbs.

I am currently revising the large bee subgenus *Dialictus* (Halictidae: *Lasioglossum*). *Dialictus* are the most commonly collected subgenus of bees in North America (Giles and Ascher, 2006). In some surveys, *Dialictus* alone represents over 50% of bees collected (MacKay and Knerer, 1979; H. Ngo, pers. comm.). The pollination services provided by this group are likely substantial. However, they are often underrepresented in many pollination studies due to their small size (usually 4-6mm).

*Dialictus* are extremely difficult to identify to species. In many museum collections the vast majority of *Dialictus* remain unidentified and it seems highly probable that many of the named specimens are incorrectly identified. The taxonomic difficulties of this group are unfortunate because, not only are they extremely common, but they are also one of the most ideal groups for studying the evolution of social behaviour in insects. Nearly the full range of bee social behaviour exist in this group, including but not limited to solitary, eusocial and even cleptoparasitic forms (Michener, 1974).

A purely morphological based study of *Dialictus* would be an exercise in frustration and futility. Experienced bee taxonomists (perhaps wisely) have usually avoided the group as much as possible. The possibility of an alternate method of identifying this group, such as DNA barcoding, is therefore, very attractive. However, before DNA barcoding can be utilized for identification, a database of verified sequences must be generated. Constructing such a database is one component of my work. My research generally follows the familiar pattern of a traditional taxonomist. A great deal of comparative work at the microscope with verification of names using type material is the core of my studies. However, samples from a subset of specimens are used for DNA barcoding. A single leg from a *Dialictus* provides enough DNA for the procedure while leaving the specimen nearly completely intact (with at least one of each paired appendage remaining) as a voucher. The mo-

morphological studies and helps to suggest which "species" require additional morphological assessment.

In some cases, DNA barcodes are able to recognize cryptic species. The case of *Lasioglossum (Dialictus) tegulare* (Robertson) provides an interesting example. *Lasioglossum tegulare* is one of the few easily recognized species of *Dialictus* by virtue of its enlarged and punctate tegula. Such easily identified "species" may be more likely to be a complex of cryptic species (Packer and Taylor, 1997). Its range is limited to the eastern half of North America from Nova Scotia to Florida. Two additional names, *L. ellisae* (Sandhouse) and *L. lepidii* (Graenicher) have been synonymized with *L. tegulare* (Moure and Hurd, 1987). Evidence from DNA barcodes paints a different picture. They suggest there are five distinct species that are currently recognised as being *L. tegulare* (Fig. 1). By type comparison it seems that two of these species correspond to the erroneously synonymized names *L. ellisae* and *L. lepidii*. There are also two previously unrecognized species that require description (Gibbs, *in prep.*). The five species appear partially divided along a latitudinal gradient with overlapping areas of sympatry.

Although the virtue of DNA barcoding may be evident from the above example it is not without limitations. The COI fragment used is unable to differentiate *L. rohweri* (Ellis) from *L. versatum* (Robertson) (Fig. 2) despite several morphological characters that are able to distinguish the two species. DNA sequence data from an additional gene may be able to resolve species not recognized by the standard barcode sequence (Stoeckle, 2003).

These two examples illustrate that neither morphology nor barcodes alone are sufficient to fully and efficiently describe *Dialictus* species richness. It would be advantageous for taxonomists to embrace DNA barcoding as an additional tool for their studies. Only by using all the resources at our disposal will we be able to describe and conserve the maximum amount of biodiversity possible and correctly identify economically important organisms with certainty.

## Jason Gibbs

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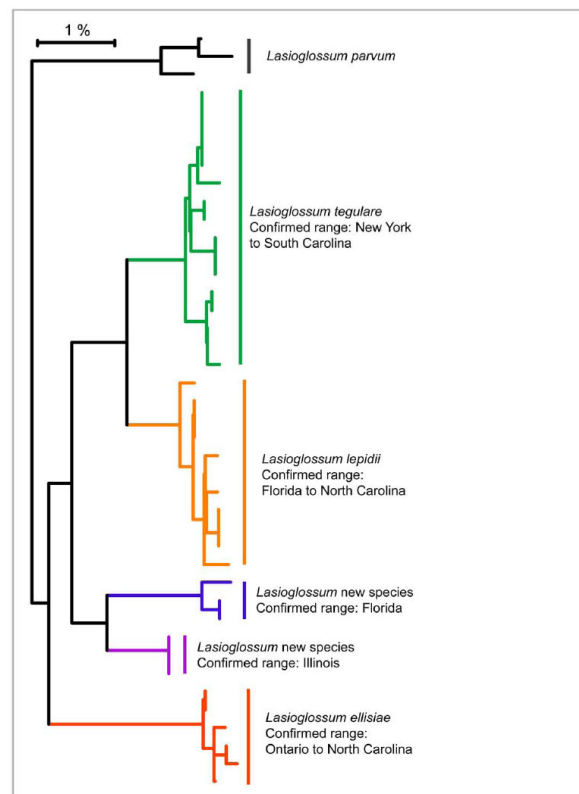


Figure 1. Neighbour-joining tree of DNA barcodes for the "species" *L. tegulare*. Clusters for putative cryptic species are colour coded and labeled. Scale bar for branch lengths represents 1% sequence divergence.

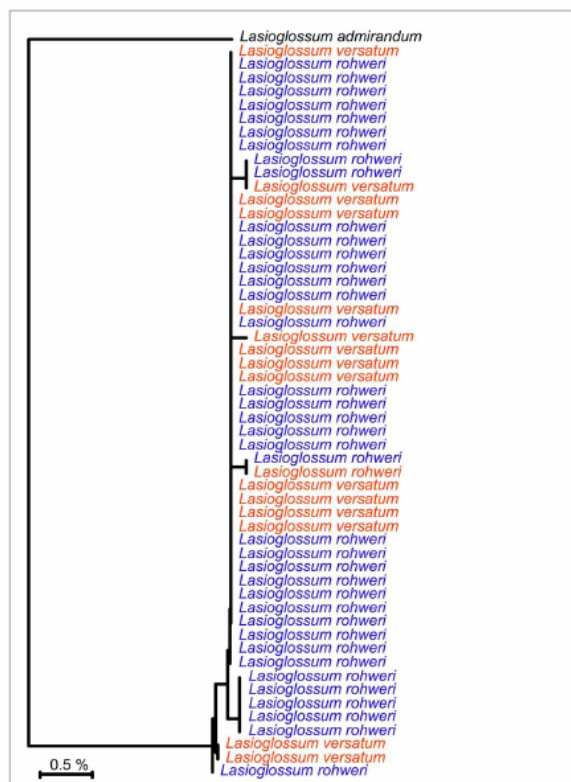


Figure 2. Neighbour-joining tree of DNA barcodes for the species *L. rohweri* and *L. versatum*. Intraspecific sequence divergence exceeds variation between species. Scale bar for branch lengths represents 0.5% sequence divergence.



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Dave Hunt, ESO Secretary  
Agriculture and Agri-Food Canada  
Research Centre  
2585 County Road 20  
Harrow ON N0R 1G0

**Student, amateur and retired** memberships in Canada are free but **must be renewed each year!** Free memberships may be renewed electronically by sending an email to ESO Secretary, Dave Hunt at:

[huntd@agr.gc.ca](mailto:huntd@agr.gc.ca)

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## Thanks for keeping "DAVE" up-to-date!

As a member of the ESO, we ask you to do your part to keep our membership directory current. If your contact information changes (particularly your email address) in the future, please forward it to ESO Secretary, Dave Hunt at:

[huntd@agr.gc.ca](mailto:huntd@agr.gc.ca)

Several times a year, the sub-committees of the ESO Governing Board will email members newsletters and information regarding the ESO Annual Meeting.

**Stay in the know about the ESO** by sending Dave your email and address changes!







# Entomological Society of Ontario

## Treasurer's Report -- Fiscal 2006

### 01 January to 31 December 2006

FISCAL BALANCE		2006
1. Publication (JESO Volume/Printer)	(136/UTP)	
<b>Credits - Previous Volume 135</b>		
Page Charges (svgs)		\$ 3,732.18
Reprints (svgs)		\$ 1,101.47
Subscriptions (svgs)		\$ 780.00
1 Subscriptions (US\$ to C\$ equiv.)	C\$	\$ 3,125.42
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Page Charge Waivers/Grants (JV)		\$ -
		<b>\$ 3,704.04 B</b>
<b>Debits - Volume 135 &amp; 136</b>		
3 Printing		\$ 8,083.37
3 Reprints		\$ 870.20
2 Colour Plate Surcharge		\$ 654.10
4 Layout / Technical Editing		\$ 2,840.34
Editor		\$ -
		<b>\$ 12,448.01 C</b>
Publication (Subtotal 1 = A+B-C)		<b>\$ (4.89)</b>

2. General		
<b>Credits</b>		
Membership Dues (svgs)		\$ 3,056.00
1 Membership Dues (US\$ to C\$ equiv.)	C\$	\$ -
Interest/Credits (svgs)		\$ 296.94
Interest/Credits (cheq)		\$ 3.25
5 Bond Interest (svgs)		\$ 444.30
ESC Grant - Pub.Encour. (svgs)		\$ -
ESO Lapel Pins		\$ 240.00
6 Miscellaneous (svgs)		\$ 429.66
Advances (cheq)		\$ -
		<b>\$ 4,470.15</b>
<b>Debits</b>		
7 Newsletter Editor		\$ -
7 Secretary		\$ 241.32
8 Treasurer		\$ 1,750.72
Website		\$ 57.76
9 Prizes, Awards		\$ 1,518.45
10 Bank Charges		\$ 77.80
Equipment Grant		\$ -
11 Public Education		\$ 58.00
ESO Lapel Pins		\$ 1,544.70
12 Miscellaneous		\$ 451.00
Page Charge Waivers/Grants (JV)		\$ -
		<b>\$ 5,699.75</b>

General (Subtotal 2) **\$ (1,229.60)**

3. Meeting		
<b>Credits</b>		
AGM Surplus (svgs)		\$ -
Registration from ESO2006		\$ 1,225.00
ESO2006 Loan Return (svgs)		\$ 1,000.00
		<b>\$ 2,225.00</b>
<b>Debits</b>		
ESO2004 Loss		\$ 1,375.00
ESO2006 Loan		\$ 1,000.00
Registration replacement to ESO2006		\$ 1,225.00
		<b>\$ 3,600.00</b>
Meeting (Subtotal 3)		<b>\$ (1,375.00)</b>

**FISCAL BALANCE (Subtotals 1-3) \$ (2,609.49)**

Kevin Barber – Treasurer

Carl Nystrom – Auditor

B. Leo Cadogan – Auditor

TOTAL ASSETS		2006
<b>FISCAL BALANCE (Subtotals 1-3)</b>		
Fiscal Activity - CDN Svgs Account		\$ 14,922.49
Fiscal Activity - CDN Cheq Account		\$ (21,744.51)
1 Fiscal Activity - US Account	C\$	\$ 4,212.53

### TOTAL ASSETS

<b>CDN Savings Account</b>		
Opening Balance		\$ 13,543.39
Fiscal Activity		\$ 14,922.49
Transfer to CDN Cheq. Acc't		\$ (18,000.00)
Transfer from US Acc't		\$ -
Transfer from CDN Cheq. Acc't		\$ -
13 Bonds Mature / Cashed		\$ 27,129.30
5 Excess Bond Interest for Fiscal Use		\$ (129.30)
*** Bond Purchase (2006 Series)		\$ (27,000.00)
Closing Balance		<b>\$ 10,465.88 D</b>

<b>CDN Chequing Account</b>		
Opening Balance		\$ 2,623.08
Fiscal Activity		\$ (21,744.51)
Transfer from CDN Svgs. Acc't		\$ 18,000.00
Transfer from US Acc't		\$ 3,331.50
Transfer to CDN Svgs. Acc't		\$ -
Closing Balance		<b>\$ 2,210.07 E</b>

<b>US Account</b>		
Opening Balance	US \$	\$ 3,839.19
1 Fiscal Activity	US \$	\$ 3,720.00
Transfer to CDN Cheq. Acc't	US \$	\$ (3,000.00)
Transfer to CDN Svgs. Acc't	US \$	\$ -
Closing Balance	US \$	\$ 4,559.19
CDN equivalent	C\$	<b>\$ 5,162.83 F</b>

<b>Outstanding Loans</b>		
14 ESC/ESO2008		<b>\$ 1,500.00 G</b>

<b>Investments - Ontario Savings Bonds</b>		
* 2001 - Principal		\$ 10,000.00
2001 - Prev. Accum. Interest		\$ 2,714.23
2001 - Current Interest		\$ 415.07
13 2001 - Principal + Interest redeemed		\$ (13,129.30)
** 2005 - Principal (Ann. Int. to Account)		\$ 14,000.00
13 2005 - Principal redeemed		\$ (14,000.00)
*** 2006 - Principal NEW (Ann. Int. to Account)		\$ 27,000.00
Total Investments - OSB		<b>\$ 27,000.00 H</b>

<b>TOTAL ASSETS (D+E+F+G+H)</b>		<b>\$ 46,338.78</b>
Increase (Decrease)		\$ (2,415.53)
- Attributable to fiscal transactions / OSB int.		\$ (2,298.42)
- Attributable to change in exchange rate		\$ (117.10)

15 US account transfer exchange rate	1.1105
16 Reporting exchange rate (interim/year-end)	1.1324
17 Previous year-end exchange rate	1.1392
18 Member dues rates	\$30/\$0/\$10

- \* 5-year step-up (4.25, 5.00, 5.75, 6.25, 6.75%) matured 21 June 2006  
Bond Calculator – <http://www.ontariosavingsbonds.com/calculator.asp>
- \*\* 5-year step-up (2.25, 2.75, 3.00, 3.50, 4.00%) annual interest to Svgs Acct
- \*\*\* 5-year step-up (3.70, 3.80, 3.90, 4.00, 4.25%) annual interest to Svgs Acct
- 1 - US account transactions converted to C\$ to calculate "Fiscal Balance" then reported in US Account in US\$
- 2 - Vol.136 - colour plate cost subsidized
- 3 - Vol.135 - \$4334.46, reprints \$437; Vol.136 - \$3748.91, reprints \$432.20
- 4 - Vol.135 - \$1159, Tech.Edit \$190; Vol.136 - \$1060.54, \$430.80 Tech.Edit
- 5 - \$315 OSB2005 direct deposit; \$129.30 OSB2001 interest not reinvested
- 6 - Purolator damage claim JESO Vol.135
- 7 - combined mailing for 2 Newsletters, Balloting, Invoices
- 8 - postage \$908.04 JESO135, \$769.86 JESO136; \$72.82 envelopes, stamp
- 9 - 3 plaques \$228.35: 2 Service (Prevost, Pree), 1 Fellow (Wiggins);  
1 banquet ticket \$40; 5 Student Awards @\$250: 2 Pres.Prize, 3 Travel
- 10 - includes \$42.80 for Safety Deposit Box rental
- 11 - Insect Fair - travel and supplies - \$48 M.Pickles, \$10 L.Timms
- 12 - \$387.60 Graphics Studio - ESO logo; \$18.40 U.Guelph (D.Gagnier) photo-copy ESO Archive research; \$45 K.Barber - "Cover Your Assets" seminar
- 13 - OSB2001 matured; OSB2005 redeemed
- 14 - ESC/ESO2008 Joint Annual Meeting - startup loan repayable before final accounting of meeting finances
- 15 - actual US-C\$ exchange rate achieved during account transfer
- 16 - exchange rate used at end of reporting period (29-Dec-2006)
- 17 - used to calculate value of US in C\$ if there had been no change in rates
- 18 - Regular/Domestic Student/International Student



## Treasurer's Report

### Fiscal 2006

The following is the annual financial report for the period 01 January to 31 December 2006. Carl Nystrom and Leo Cadogan (Great Lakes Forestry Centre, Sault Ste. Marie) audited the report on 20 March 2007 and the results were favourable and forwarded to the Secretary.

Under **Publication**, the income transactions for JESO volume 135 are now nearly complete (3 subscriptions outstanding). There is also one outstanding page charge (\$455) which is likely to remain as a bad debt and will be dealt with at the Spring Board Meeting. Those for volume 136 are not yet complete with 68 subscriptions, \$1,120 page charges, and \$370 reprints outstanding. This leaves a significant portion of income activity to carry over to fiscal 2007. There was a one-time printing of a colour plate that was charged back at a rate of 25%. All bills have been paid for both volumes 135 & 136 (incl. a layout deposit of \$425 against JESO 135 reported in fiscal 2005) leaving a current deficit of \$4.89 in this section of our business reported for fiscal 2006. There was an unplanned double-up of 2 volumes in 2006 with the delay in volume 135. There is a planned double-up of publication of volumes 137 & 138 in fiscal 2007 which will return us to our appropriate volume number and year. "Reprints" have now been separated from "Page Charges" as we may remove this option by moving to a PDF-alternative for our authors.

Under **General**, membership dues of \$3,056 have been received and \$300.19 bank interest has been earned. Bond interest is primarily comprised of \$315 paid directly to our account from our 2005-series bonds. Since most of the bond interest from the 2001-series was reinvested, it is reported below in the estimation of *Total Assets*. In addition, there was \$129.30 in excess interest accumulated from our 2001-series bonds that was not reinvested. A new production of ESO lapel pins was received and generated \$240 of sales (\$5 each) at our AGM while we received a damage settlement of \$429.66 on our shipment of JESO 135 books from the carrier. There were the usual modest expenditures for mailing newsletters and ballots (\$241.32), website (\$57.76), and bank charges (\$77.80). The combined cost of two mailings of JESO was \$1,750.72. Awards included 5 student awards (\$250 each) as well as 3 service awards and a complimentary banquet ticket (totalling \$1,518.45). The cost for production of our 500 ESO pins was \$1,544.70 which should be recovered over time as sales accumulate. Participation in the Insect Fair incurred nominal

expenses totalling \$58. The major component of the miscellaneous expenses (\$451) was \$387.60 for a graphical reworking/rejuvenation of our ESO seal or logo for use in various media in both colour and black and white. This leaves a reported deficit of \$1,229.60 in this section which can be more than accounted for with the one-time net investment in pins and the double mailing of JESO (Treasurer).

Under **Meeting**, there was a final reporting and reimbursement of a loss at ESO2004 of \$1,375. The remaining activity here represents offsetting transactions of a repaid loan and exchange of ESO2006

The *Fiscal Balance* of our bank accounts is reported as a deficit of \$2,609.49 and is then distributed across the three accounts. There was one transfer of \$18,000 from the Savings to the Chequing Account to cover expenditures. The receipt of \$27,129.30 from liquidated bonds (2001- & 2005-series) was then re-distributed to *Investments* (\$27,000 as described below) with the residual \$129.30 used for fiscal purposes in our *General* section (mentioned above). There was also a transfer of \$3,000 US to the Chequing Account (\$3,331.50 CDN).

The advance loan of \$1,500 to ESC/ESO2008 is identified under *Outstanding Loans*.

The 2001-series Ontario Savings Bonds (OSBs) matured in 2006 having accumulated an additional \$415.07 this year leading to a total redemption value of \$13,129.30. All the 2005-series bonds (\$14,000) were redeemed early as the interest rate was nearly a full percentage higher for the 2006-series bonds. A total of \$27,000 was reinvested in 2006-series 5-year step-up OSBs paying annual interest to our Savings Account for fiscal use. The investment plan of establishing 5 years of overlapping investments of equal amounts is consequently delayed by one year.

The Society remains in sound financial shape and presently has an estimated reserve of \$17,838.78 in the three bank accounts. With the principal amount of the OSBs totalling \$27,000, the outstanding loan of \$1,500, and using a year-end currency exchange rate of 1.1324, *Total Assets* are estimated at \$46,338.78.



Photo courtesy of Matt Ceolin

## INTERVIEW WITH ANGELA RAWLINGS

Following my book review of *Wide Slumber for Lepidopterists* (published in 2006 by Coach House Books), by Canadian poet Angela Rawlings, last November, I interviewed Angela over email. To bring you up to date this spring, *Wide Slumber* is continuing to receive praise from the public. *Wide Slumber* was included in The Globe and Mail's top 100 books of 2006. It was recently awarded an Alcuin Citation for Book Design, and it's been nominated for the Gerald Lampert Award for Poetry.

In the interview, she discusses the book, the recent stage production of *Wide Slumber* in Toronto, her favourite moth, how she approaches writing and gives us a peak at what she's currently working on. I hope you enjoy reading her responses as much as I did!

**First, let me congratulate you on your book and the 11& 12 November 2006 stage production of your book in Toronto! How exciting to have your book become flesh! Would you introduce both to our readers?**

Thank you so much! I'd love to introduce both the page and stage versions... In Spring 2006, I published a book of experimental poetry called *Wide slumber for lepidopterists*, a long poem that investigates both the studies of sleep/dreams and butterflies/moths. *Wide slumber* is told from the perspective of a group of entomologists, obsessed with the subject of lepidoptery, and tracks their subconscious behaviour and information processing during a night of sleep. This November, Theatre Commutiny staged a production of *Wide slumber* for Harbourfront Centre's Hatch: Emerging Performance Projects in Toronto. If you'd like to know more about the book or the performance, I'd encourage you to check out my website at [www.commutiny.net](http://www.commutiny.net).

**What was it like to have your poems on**

**stage? How difficult was it to find the right sounds and movement to suit your poems? How did the audience respond? Can you share with us a favourite moment in all of this for you?**

Translating the poems from page to stage was very much a journey of discovery. I had the good fortune to work with a phenomenal team of artists, whose enthusiasm for the project made my heart feel full each time we met. The largest difficulty we faced was a restriction of in-person time. With a schedule limited to one week of development and performance, we found ourselves racing through each discovery, pinning sound and movement without ample time for study. As a result, the audience responded with warmth, curiosity, and an abundance of feedback for further development of the work.

**Did you have entomologists or lepidopterists in your audience last night or the night before? Equally, have you received feedback from the arts community in Toronto? Can you share some of the comments with us today?**

I know that one amateur lepidopterist attended Sunday night's performance, but otherwise none identified themselves to me. I have received some lovely e-mails from Ontario-based entomologists who've encountered the book, though. I find it absolutely invigorating to be a part of cross-pollination between disciplines (in this case, broadly art and science).

Comments about the show ranged from positive reinforcement of moments that worked well to areas in which the audience would enjoy further development. Many audience members responded with excitement and awe to Geoff Bouckley's clever use of lighting throughout the show, which included traditional overhead theatre lighting as well as numerous stage-based and hand-held lighting devices (flashlights, LEDs, fluorescents). At one point, a bare light-bulb slowly lowered to hover above the stage, while the performers deconstructed sentences. "So we dream the same. Do we dream the same?" broke into its phonemes, and eventually built a soundscape of insect sounds. As they deconstructed orally, the performers became mesmerized by the light bulb, batted it, and swayed to its pendulum swing. Au-

dience members requested an extension to the scene, and exploration of other light bulb interactions.

**I'd like to ask you a few questions about your book. Your poetry has been called experimental, avant garde..... I have to confess, I've not read a book like yours before. While reading, I became entranced in the flow of your writing though the words themselves lost form and sense at times, there was excitement and curiosity at the arrangements of letters on the page and sounds I might whisper aloud to myself. This is not the poetry I learned to write in public school or high school. It is fresh, creative, flowing and inspiring. There is structure and function to letters and words but you are not writing within a strict parameter or form such as haiku, for instance. You even create new words and letter combinations suggesting that your art is not limited by what appears in language. Is the avant garde genre large or new in Canada? Where can I find more poetry like this?**

Canadian avant-garde (also referred to as innovative, experimental, radical, or non-traditional, depending on the writer/reader) literature is alive and well. In fact, Canada's known internationally for its experimentation in literature. You might investigate the catalogues of publishers such as Coach House Books, The Mercury Press, Talon-Books, Nightwood Editions, and BookThug. Check the poetry section of your local bookstores for books by these publishers. A few of my favourite Canadian experimenters include bpNichol, Nicole Brossard, Margaret Christakos, Steve McCaffery, and Christian Bok. Two other wonderful writers who've written fascinating poems about entomology are Chris Dewdney and Jill Hartman.

**What made you want to write this book: Wide Slumber for Lepidopterists? Tell us what inspired your title.**

I initially started this project as a collaborative exercise with visual artist Matt Ceolin. He'd completed an exhibit at OCAD (Ontario College of Art and Design) in 2000 that featured over 200 life-size insects constructed of metal and acetate. I chose to follow Matt's impulse to study insects,

and focused on lepidoptery after locating the word in the dictionary by chance (love the word!).

It seemed natural that Matt and I would engage in an artistic collaboration about insects. Both of our fathers raised bees in our formative years. In fact, the book was nearly dedicated to our dads who raised bees -- Matt's father, Walter Ceolin (Conservation Officer from Sault Ste. Marie), and my dad (Stu Rawlings).

The title itself came from a stream-of-consciousness writing exercise. I was surprised by the line when it occurred, and wondered what might happen if I were to breed the jargons and facts of two disparate subjects together. What would the spawn of these incompatible bedfellows resemble?

**When you were writing your book, did you have a specific audience in mind? Did that shape your writing?**

I began writing the project with myself as the audience, and later expanded it to a few friends. As the book developed over six years, I would occasionally daydream how other people might interact with the text -- what of entomologists, or high-school students from Toronto's urban core, or Icelandic musicians, or my parents, or literary critics, or my partner, or poetry colleagues...? My daydreams shaped my writing, yes, as much as our imagined interactions with other people affect our choices in how we communicate.

**What personal experiences with insects or entomologists did you draw from when writing your book? Do you have a favourite Lep? I noticed your glossary included *Fritillary* and *Saturniid*, yet your text includes several *Lepidopteran* names.**

The glossary points as much to favourite content as it does to words I enjoy pronouncing. Much of the book is an exercise in defamiliarization, I think. Have you ever repeated a word until it loses sense but retains a heightened sonic value?

My favourite moth? *Actias luna*. Suits the slumber as well as the lepidoptery in me. When I lived in Northern Ontario, it was a treasured time of year when luna moths would pause in porch light.



**I am curious about the way you defined butterfly in the glossary, “~to cut and spread open and lay flat”. It says nothing of the diurnal lepidopterous insect I am familiar with that sports knobbed antennae and scales on its’ wings. By contrast, moth is defined as “nocturnal insect with feathery antennae.” Do you wish to comment?**

I love how intently you studied the glossary!

As the crux of my book was to pair lepidoptery with sleep studies, I wanted to focus primarily on night-time – sleeping at night, and “nocturnal insects with feathery antennae.” As the term ‘butterfly’ has multiple definitions, I chose the less anticipated definition for its clinical detachment and implied violence... not to mention, the action sounds like what we do with books.

**Is there one genre you are most comfortable writing? ...perhaps one you feel most suited to...please expand on any goals you might have for yourself regarding diversity and versatility. You’ve been described as a multidisciplinary artist who enjoys dance, writing and performance arts.**



Photo courtesy of Matt Ceolin



Photo courtesy of Matt Ceolin

Part of my interest in exploring sleep/dream studies and lepidoptery was to immerse myself in a world where classification is a major, useful tool. As a person, I find it fascinating to consider how we self-identify, and I have been careful in how I have chosen to self-identify in a “working” capacity. If I identify poet, that may conjure certain preconceptions and stereotypes that do or do not match my personality. ‘Poet’ also feels like a tidy box, that doesn’t leave room for the possibility of working in other capacities. Lately, I have self-identified as a multidisciplinary artist to signal that I work in many disciplines, specifically those whose foci include sound, text, and movement in tandem.

**Have you started on your next work? Does it have an entomological theme? Can you share a little of your current work with us?**

I’ve just begun research into sound ecology for a new project with the working title “Environment Canada.” The project is in its infancy, so it’s unclear in what directions it’ll head. The line “were moths still here?” has appeared, though... a gentle shout-out to my long-term obsession with the subject.

An excerpt from “*Environment Canada*” appears in the Spring 2007 edition of *Prism International*, a literary journal out of Vancouver available in the magazine section of most fine bookstores.

<http://www.prism.arts.ubc.ca/currentissue/453environmentcanada1.htm>

I want to ask you a personal question about how you personally approach the writing process and tap into the creativity inside you. In a previous interview with Shawn Micallef of terminus1525, I read that you like to write outside, and if at all possible, where there is a breeze. You also mentioned that you often write with loud music playing in the background; that music was helpful to distract you from the fact you are writing, and you believed you get more done that way. Are you aware of a connection between the breeze and music?

It's sensual stimulation, bodily awareness. I find I write, feel, work, act, play better when I'm tuned into my body. Opening my ears to music, feeling breeze on my skin – these and more remind me there's more to my body than my brain, and they remind me to consider the sensual materials of my working tools (in the case with my book, blank pages and letter forms).

(Read or listen to the entire terminus 1525 interview by clicking on Angela's name at: <http://terminus1525.ca/feature> .)

Special thanks to Angela Rawlings for her generous responses and for allowing us to print some of her favourite images of Matt Ceolin's photographs from Wide Slumber.

Dana Gagnier

## Missing Members:

*If you see these members, please ask them to send their contact information to ESO Secretary David Hunt.*

- ◆ Teri Dickinson Jenner
- ◆ Steven Paiero
- ◆ Sheila Goodfellow
- ◆ Zahirul Islam
- ◆ Hugo Ortiz-Saavedra
- ◆ Chris Robinson
- ◆ Hien Ngo
- ◆ Heather Zurbrigg
- ◆ Ingrid Aguayo

## MEETINGS: Outside Ontario

**57th ESC Annual Meeting of the Entomological Society of Canada and the Entomological Society of Saskatchewan,**  
30 September— 3 October, 2007,  
Delta Bessborough Hotel, Saskatoon, Saskatchewan

Meeting Theme: *Insects: Microscale Subjects for Macroscale Research*

**ESA Annual Meeting,**  
December 9-12, 2007,  
Town and Country Resort and Convention Centre,  
San Diego, California

Meeting Theme: *Making Connections: Innovation, Initiative, Influence*

Website: [http://www.entsoc.org/annual\\_meeting/current\\_meeting/index.htm](http://www.entsoc.org/annual_meeting/current_meeting/index.htm)

**XXIII International Congress of Entomology,**  
July 6-12, 2008  
International Conventional Centre, Durban, South Africa

Meeting Theme: Celebrating Entomology: Contributions to Modern Science

Website: <http://www.ice2008.org.za>

## WANTED: Entomology News

Notices of upcoming entomological events, ideas for columns, and articles of interest to ESO members are always welcome. Send submissions to:

Jennifer Allen  
ESO Newsletter Editor

# Make the Trip to the ESO Annual Meeting in 2007: Undergraduate and Graduate Student Travel Awards

## University and college professors and all teachers of entomology:

Do you know of a student whose research should be featured at the ESO Annual Meeting in Sault Ste. Marie this fall? Please inform your students that the ESO has travel awards available to both **undergraduate and graduate** students.

## Students:

Each year the Entomological Society of Ontario provides travel grants to assist students with their travel expenses to the annual meeting. The ESO awards both a graduate and an undergraduate travel grant worth \$250 each! The Society wishes to encourage student members to share their research with other members by participating in the annual meeting. We believe that participation in the annual meeting is a great way for students to meet others with similar interests and to gain valuable feedback on their research efforts.

Student members of the ESO who are presenting a poster or a paper at the Annual Meeting of the Entomological Society of Ontario being held on the 26 - 28 October 2007, at the Great Lakes Forestry Centre in Sault Ste. Marie, ON are eligible to apply\*. In addition to travel awards there will also be **President's Prizes** awarded at the meeting for exceptional paper and poster presentations.

Interested students applying for the Travel Award (s) should include: (1) a title and short abstract for their project; (2) a statement outlining why the funds are required and how the award will be used to support their participation in the ESO Annual Meeting; (3) a letter from their supervisor; (4) a curriculum vitae or other document outlining past academic achievements, publications and awards / scholarships, and any activities that promote entomology in Ontario. Only active student members of the ESO who are enrolled in a graduate or undergraduate program will be considered for travel awards.

Note that students may receive only one travel award while registered for a single degree. Please don't forget to include contact information (phone number, mailing and email address).

**Deadline for application is September 30th, 2007.**

Recipients will be notified at least two weeks before the annual meeting.

Need to become a member or renew your membership? It's easy to do and free for students! Check out the details online at <http://www.entsocont.com/member.htm>.

Please send travel award applications to:

**Hannah Fraser, ESO Director**  
Ontario Ministry of Agriculture, Food  
and Rural Affairs  
4890 Victoria Avenue North  
Vineland, ON CANADA L0R 2E0  
905-562-1674  
[hannah.fraser@ontario.ca](http://hannah.fraser@ontario.ca)

**JESO**

## It's now on-line!

Did you know that you can access electronic copies of JESO articles dating back to 1993. Visit <http://www.entsocont.com/pub.htm>.

Working on a manuscript? Submit it to JESO. Instructions to authors are available on-line at the web address above. The submission deadline for the 2008 publication year is September 1, 2007. Electronic submissions should be directed to the JESO editor, Miriam Richards — [Miriam.Richards@brocku.ca](mailto:Miriam.Richards@brocku.ca).

