

# Bulletin

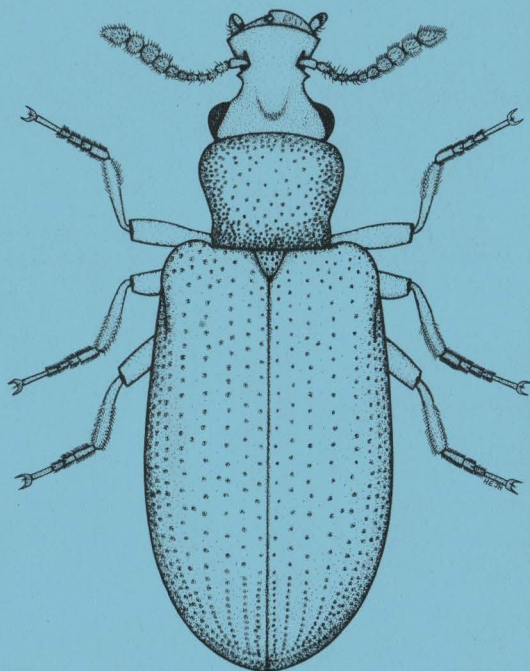
Entomological Society  
of Canada

Société d'Entomologie  
du Canada

Volume 30

No. 1

March/mars 1998



*Entomological Society of Canada*  
*Société d'Entomologie du Canada*

393 Winston Avenue, Ottawa,  
Ontario, Canada K2A 1Y8

Table of contents on back cover / Table  
des matières sur la couverture-arrière

Date of issue/Date de publication:  
March/mars 1998

Web Page for the ESC: <http://www.biology.ualberta.ca/esc.hp/homepage.htm>

E-mail: [entsoc.can@sympatico.ca](mailto:entsoc.can@sympatico.ca)

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.

Le **Bulletin de la Société d'Entomologie de 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.

Illustrated on the front cover is a *Rhinosimus viridiaeneus* Randall. *R. viridiaeneus* belongs to a group of beetles known as narrow-waisted bark beetles, which are transcontinental in distribution. The adults and larvae are predaceous, feeding on wood-boring beetle larvae within their galleries.

La page couverture illustre la adulte de *Rhinosimus viridiaeneus* Randall. *R. viridiaeneus* fait parti d'un groupe de coléoptères connu sous le nom de scolyte de l'écorce à faille étroite, qui ont une distribution transcontinentale. Les adultes et les larves sont des prédateurs qui se nourrissent de larves de coléoptères perce-bois à même leurs galleries.

List of contents/Table des matières	Volume 30, no. 1, Mar/mar 1998
Society Business / Affaires de la Société.....	1
Meeting Announcements.....	1
ESC/ESA Tentative Program .....	2
ESC/ESA Registration forms.....	4
ESC/ESA Abstract Forms.....	6
ESC/ESA Associates Activities.....	8
ESC/ESA Linnaean Games.....	10
Committees and Representatives for 1997/1998.....	12
Call for Nominations - Fellows.....	13
ESC President's Report .....	14
News of Organizations.....	17
BSC Terrestrial Arthropod Report.....	17
ICZN.....	21
Personalia .....	23
Position Available.....	23
Publications.....	24
Scholarships and Grants.....	31
ESC Postgraduate Awards.....	31
Meetings .....	33
Miscellaneous.....	34
Net, Shovel and Axe.....	34
Membership form (new members only).....	36



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.

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.



# SOCIETY BUSINESS/AFFAIRES DE LA SOCIÉTÉ

## Notice of Executive Council Meeting

The mid-term meeting of the Executive Council will be held at the Entomological Society of Canada office in Ottawa on April 18, 1998.

La réunion de mi-session du Conseil Exécutif aura lieu au Siège social de la Société d'entomologie du Canada le 18 avril, 1998.

## 48th Annual General Meeting

The Annual General Meeting of the Entomological Society of Canada will be held at the *Chateau Frontenac* in Quebec City on November 3, 1998.

La réunion annuelle générale de la Société d'entomologie du Canada aura lieu au *Chateau Frôntenac* à Québec, P.Q., le 3 novembre 1998.

## Governing Board Meeting

The Annual Meeting of the Governing Board will be held at the *Chateau Frontenac* in Quebec City on October 31, 1998.

La réunion annuelle du conseil d'administration se tiendra au *Chateau Frôntenac* à Québec, P.Q., le 31 octobre 1998.

Matters for consideration at any of the above meetings should be sent to the secretary at the address below:

Veuillez faire part au secrétaire de tout sujet pouvant faire l'objet de discussion à l'une ou l'autre de ses réunions en communiquant à l'address suivante:

Dr. Rick West  
Box 515, Portugal Cove  
Newfoundland AOA 3K0  
phone and fax: 709-895-2734  
email: reely.west@roadrunner.nf.net

*Please send all correspondence concerning  
the Bulletin to:*

Dr. Hugh J. Barclay  
Bulletin Editor  
Pacific Forestry Centre  
506 West Burnside Road  
Victoria, B.C.  
V8Z 1M5

Tel: (250) 363-0736

Fax: (250) 363-0775

E-mail: [hbarclay@pfc.forestry.ca](mailto:hbarclay@pfc.forestry.ca)

*Please send all correspondence concerning  
Book Reviews for the Bulletin to:*

Dr. Sheila Fitzpatrick  
Chair, Publications Committee  
Pacific Agri-Food Research Centre  
6947 #7 Hwy, P.O. Box 1000  
Agassiz, B.C.  
V0M 1A0

Tel: (604) 796-2221

Fax: (604) 796-0359

E-mail: [fitzpatrick@em.agr.ca](mailto:fitzpatrick@em.agr.ca)

The deadline for submissions to be included in the next issue (Vol. 30(2)) is **May 1, 1998**

La date limite pour recevoir vos contributions pour le prochain numéro (Vol. 30(2)) est le **1 mai 1998**

**Joint Meeting of the  
Entomological Society of Canada and the  
Entomological Society of Québec**

Le Château Frontenac, Quebec City, 31 October - 4 November 1998

**TENTATIVE PROGRAM**



**Saturday, 31 October**

08:30-17:30 E. S. C. Governing Board Meeting

**Sunday, 1 November**

09:00-16:30 Registration  
10:00-16:30 Workshops (2)  
17:00-19:00 Linnaean Games  
19:00-20:30 Opening Ceremonies, ESC Awards, Gold Medal Address  
20:30-22:30 Mixer

**Monday, 2 November**

08:00-16:30 Registration  
08:30-12:00 Symposium I: "Applying the Basics of Chemical Ecology in IPM" (J. N. McNeil)  
13:30-16:00 Submitted papers / Graduate student paper competitions  
15:30-16:30 Heritage Lecture  
16:30-18:00 Entomological Society of Quebec Annual General Meeting  
17:30-19:30 Linnaean Games: Finals  
19:30-20:30 Students meet the Board  
20:30-23:00 President's reception (by invitation only)

**Tuesday, 3 November**

06:00-09:00 Installation of posters  
08:30-12:00 Symposium II: "Evolutionary Ecology: A Conceptual Framework for the Development of IPM" (B. D. Roitberg)  
08:30-12:00 Workshop  
13:30-16:30 Submitted Papers and Poster session  
16:30-18:00 Entomological Society of Canada Annual General Meeting  
19:00-23:00 Cocktail and Banquet

**Wednesday, 4 November**

08:30-12:00 Symposium III: "Insect Physiology and Molecular Biology: Towards the Development of Biorational Insecticides" (M. Cusson)  
08:30-12:00 Submitted Papers  
08:30-12:00 Workshop  
12:30-14:00 Entomological Society of Canada Governing Board Meeting

**LIST OF TENTATIVE WORKSHOPS**

- (1) IPM Implementation: Where are we and where should we go? (M. Letendre).  
(2) "Delia", root maggots (P. Dixon), (3) Insect-flower relations (P. Kevan)

*For additional information, please contact:*

Johanne Delisle (Chair) or Michel Cusson (Scientific Program Chair); Canadian Forest Service, P. O. Box. 3800, 1055 P.E.P.S. street, Sainte-Foy (Quebec), G1V 4C7

Telephone: (418) 648-2526

Fax: (418) 648-5849

E-mail: [jdelsile@cfl.forestry.ca](mailto:jdelsile@cfl.forestry.ca)

Telephone: (418) 648-3944

Fax: (418) 648-5849

E-mail: [cusson@cfl.forestry.ca](mailto:cusson@cfl.forestry.ca)



**Réunion Conjointe de la  
Société d'entomologie du Canada  
et de la Société d'entomologie du Québec**

Le Château Frontenac, Québec, 31 octobre - 4 novembre 1998

**PROGRAMME PROVISOIRE**



**Samedi, 31 octobre**

08h30-17h30

Réunion du Conseil d'administration de la S.E.C.

**Dimanche, 1er novembre**

09h00-16h30

Inscription

10h00-16h30

Ateliers (2)

17h00-19h00

Jeux linnéens

19h00-20h30

Inauguration officielle, Prix de la S.E.C., Discours Médaille d'Or

20h30-22h30

Réception générale

**Lundi, 2 novembre**

08h00-16h30

Inscription

08h30-12h00

Symposium I: "L'écologie chimique fondamentale au service de la lutte intégrée" (J. N. McNeil)

13h30-16h00

Communications scientifiques et celles des étudiant(e)s (Prix du Président)

15h30-16h30

Allocution du Patrimoine

16h30-18h00

Réunion générale annuelle de la Société d'entomologie du Québec

17h30-19h30

Jeux linnéens (Finale)

19h30-20h30

Les étudiants rencontrent le Conseil

20h30-22h30

Réception du Président (sur invitation seulement)

**Mardi, 3 novembre**

06h00-09h00

Installation des affiches

08h30-12h00

Symposium II "L'Écologie évolutive: une approche conceptuelle pour développer la lutte intégrée" (B. D. Roitberg)

08h30-12h00

Atelier

13h30-16h30

Communications scientifiques et présentation des affiches

16h30-18h00

Réunion générale annuelle de la Société d'entomologie du Canada

19h00-23h00

Cocktail et Banquet

**Mercredi, 4 novembre**

08h30-12h00

Symposium III: "Physiologie et biologie moléculaire des insectes: vers le développement d'insecticides bio-rationnels" (M. Cusson)

08h30-12h00

Communications scientifiques

08h30-12h00

Atelier

12h30-14h00

Réunion du Conseil d'administration de la S. E. C.

**LISTE DES ATELIERS PROVISOIRES**

- (1) Mise en Oeuvre de la lutte intégrée: Où en sommes-nous et où devons-nous aller? (M. Letendre)
- (2) 'Delia', la mouche des racines (P. Dixon)
- (3) Relations fleurs-insectes (P. Kevan)

*Pour de plus amples informations, veuillez communiquer avec:*

Johanne Delisle (Présidente du comité organisateur) ou Michel Cusson (Président du comité scientifique); Service canadien des forêts, C. P. 3800, 1055 rue du P.E.P.S., Sainte-Foy (Québec), G1V 4C7

Téléphone: (418) 648- 2526

Téléphone: (418) 648- 3944

Télocopieur: (418) 648-5849

Télocopieur: (418) 648-5849

Adresse électronique: jdelisle@cfl.forestry.ca

Adresse électronique: cusson@cfl.forestry.ca

Joint Meeting of the  
Entomological Society of Canada and the  
Entomological Society of Québec

Le Château Frontenac, Quebec City (Quebec), 31 October - 4 November  
1998

REGISTRATION FORM

Name:

.....  
Last

.....  
First

.....  
Initial(s)

Title: .....

City: ..... Province/State: .....

Postal Code: ..... Telephone: .....

Fax: ..... E-mail: .....

Registration fees (in \$CDN) including a banquet ticket and GST.

		Amount paid
Registration, regular member	(\$125)	.....
Registration, non-member	(\$145)	.....
Registration, student member	(\$65)	.....
Registration, student non-member	(\$75)	.....
Registration, accompanying member	(\$60)	.....
Name of accompanying person	.....	.....

Activities for participants and their guests

1. Rally # persons ..... x \$0 .....
2. Shopping # persons ..... x \$5 .....
3. Ile d'Orléans # persons ..... x \$25 .....

Late registration: after August 7 1998, add \$25 .....

Total amount due .....

Please make cheque payable to "Congrès SEC-SEQ 1998"

Please remember to register for the associates program if desired. For more information on activities, refer to the list of "activities for participants and their guests".

**Accommodations:** A block of rooms with one double bed (\$95/night) has been set aside for participants at the Château Frontenac. In addition, some rooms with two double beds at \$95/night will be available for students wishing to share a room with another student only. When making your hotel reservation, indicate to the receptionist that you are a student and provide both your name and the name of the other student. Those who need assistance in finding another student with whom to share a room, please contact André Bouchard (address below) before making your reservation. We will do our best to find you a roommate. These rates are only available until September 1st so make your reservations early.

Reservations are available through:

Le Château Frontenac  
1 rue des Carrières, Quebec,  
(Quebec), G1R 4P5  
1-800-441-1414  
Telephone: (418) 692-3861  
Fax: (418) 692-1751

Return this form and registration fees to:

André Bouchard, Pavillon de l'Environnement  
2480, boul. Hochelaga, Sainte-Foy,  
(Quebec), G1K 7P4  
Telephone: (418) 656-2131 poste 8873  
Fax: (418) 656-7871  
E-mail: andre.bouchard@plg.ulaval.ca

Please inform the hotel that you are attending the ESC/SEQ meeting when registering





Réunion Conjointe de la  
Société d'entomologie du Canada  
et de la Société d'entomologie du Québec

Le Château Frontenac, Québec (Québec), 31 octobre - 4 novembre 1998

FORMULAIRE D'INSCRIPTION



Name: .....  
Titre: .....  
Ville: ..... Province/État: .....  
Code postal: ..... Téléphone: .....  
Télécopieur: ..... Adresse électronique: .....

Les frais d'inscription (en \$ canadiens) incluent un billet pour le banquet et la TPS.

		Montant à payer
Frais d'inscription, membre régulier	(125\$)	.....
Frais d'inscription, non membre	(145\$)	.....
Frais d'inscription, membre étudiant	(65\$)	.....
Frais d'inscription, étudiant non-membre	(75\$)	.....
Frais d'inscription, membre accompagnant	(60\$)	.....
Nom de l'accompagnant		.....

Activités pour participants et leurs invités

1. Rallye # personnes ..... x 0\$
2. Magasinage # personnes ..... x 5\$
3. Ile d'Orléans # personnes ..... x 25\$

Inscription tardive: après le 7 août 1998, ajoutez 25\$ .....

Montant total .....

Veuillez faire votre chèque à l'ordre de "Congrès SEC-SEQ 1998"

N'oubliez pas de vous inscrire aux programmes des accompagnants si désiré. Pour de plus amples informations sur ces activités, veuillez consulter la liste des "activités pour les participants et leurs invités".

**Hébergement:** Un bloc de chambres avec un lit double a été mis de côté au Château Frontenac à 95\$/nuit pour les membres réguliers. De plus, des chambres avec deux lits doubles à 95\$/nuit seront disponibles pour les membres étudiants qui désirent partager une chambre avec un autre étudiant seulement. Lorsque vous ferez votre réservation à l'hôtel, indiquez à la réceptionniste que vous êtes étudiant et transmettez-lui le nom de l'autre étudiant. Ceux qui auront besoin d'aide pour trouver un autre étudiant peuvent communiquer avec André Bouchard (adresse ci-dessous) avant de faire la réservation. Nous ferons notre possible pour vous trouver un étudiant désireux de partager les frais d'hébergement avec vous. Ces tarifs sont disponibles jusqu'au 1er septembre seulement, alors veuillez réserver vos chambres assez tôt.

Veuillez réserver auprès de:

Veuillez retourner ce formulaire et les frais d'inscription à:

Le Château Frontenac  
1 rue des Carrières, Québec  
(Québec), G1R 4P5  
1-800-441-1414  
Téléphone: (418) 692-3861  
Télécopieur: (418) 692-1751

André Bouchard, Pavillon de l'Environnement  
2480, boul. Hochelaga, Sainte-Foy,  
(Québec), G1K 7P4  
Téléphone: (418) 656-2131 poste 8873  
Télécopieur: (418) 656-7871  
Adresse électronique: andre.bouchard@plg.ulaval.ca.

Veuillez informer l'hôtel que vous assisterez à la réunion SEC/SEQ

**Joint Meeting of the  
Entomological Society of Canada and the  
Entomological Society of Québec**

Le Château Frontenac, Quebec City (Quebec), 31 October - 4 November  
1998

**FORM FOR SUBMITTED PAPERS, STUDENT PAPERS,  
AND POSTER PRESENTATIONS**

**DEADLINE:** Postmarked June 29, 1998

**Information required:** Authors's names, name of presenter, address, title, abstract

Abstracts should be 50 words or less; submission by e-mail or on diskette would be much appreciated.  
**If it is possible, please provide your abstract in both English and French.**

**Category of presentation** (please check):

**Regular** \_\_\_\_ **President's Prize\*** \_\_\_\_ **Prix Melville-Duporte\*\*** \_\_\_\_ **Poster** \_\_\_\_

\* Students are eligible for the President's Prize if they meet the following criteria:

1. You must be enrolled in a graduate degree program or have graduated from a program less than six (6) months prior to the meeting.
2. You must be registered at the meeting; and
3. You must be the principal investigator of the paper.

\*\* Students are eligible for the Prix Melville-Duporte if they meet the following criteria:

1. You must be a member of the ESC
2. You must be registered at a university or have completed your studies during the year preceding the meeting; and
3. You must be registered at the meeting.

**Note:** Students who meet the criteria of both Societies may participate in both competitions.

**Oral presentation (regular, President's Prize, Prix Melville-Duporte):** 12 min + 3 min discussion.  
Kodak slide projectors will be the only type of audio-visual equipment available. Slides should be provided in a carousel.

**Posters:** Maximum dimensions: 1m x 2m (width x height)  
Attachment to pannel: Velcro only

**Please return to:** Michel Cusson (Scientific Program Chair) Canadian Forest Service, P. O. Box. 3800,  
1055 P.E.P.S. street, Sainte-Foy (Quebec), G1V 4C7; Telephone: (418) 648-3944; Fax: (418) 648-5849;  
E-mail: [cusson@cfl.forestry.ca](mailto:cusson@cfl.forestry.ca)





Réunion Conjointe de la  
Société d'entomologie du Canada  
et de la Société d'entomologie du Québec

Le Château Frontenac, Québec (Québec), 31 octobre - 4 novembre 1998

FORMULAIRE D'INSCRIPTION: COMMUNICATIONS ORALES  
RÉGULIÈRES ET ÉTUDIANT(E)S, ET PRÉSENTATIONS D'AF-  
FICHES



**DATE LIMITE:** portant la marque postale du 29 juin, 1998

**Informations demandées:** Noms des auteurs, nom du présentateur, adresse, titre, résumé

Les résumés ne doivent pas dépasser 50 mots. Prière d'envoyer vos résumés par courrier électronique ou sur disquette. **Pour ceux qui le peuvent, veuillez fournir votre résumé en anglais et en français.**

**Catégorie de présentation** (veuillez cocher):

Régulière \_\_\_\_ Prix du Président\* \_\_\_\_ Prix Melville Duporte\*\* \_\_\_\_ Affiche \_\_\_\_

\* Les étudiants sont éligibles au Prix du Président s'ils satisfont aux critères suivants:

- 1) ils doivent être inscrits dans un programme d'études graduées ou avoir gradué d'un tel programme dans les six (6) mois précédant la Réunion conjointe;
- 2) ils doivent être inscrits à la Réunion conjointe; et,
- 3) ils doivent être le chercheur principal de la communication.

\*\* Les étudiants sont éligibles au prix Melville Duporte s'ils satisfont aux critères suivants:

- 1) ils doivent être membres en règle de la SEQ
- 2) ils doivent être inscrits dans une université ou avoir terminé leurs études au cours de l'année précédant le congrès
- 3) ils doivent être inscrits à la Réunion conjointe.

**N. B.** Les étudiants qui satisfont aux exigences des deux Sociétés peuvent participer aux deux compétitions.

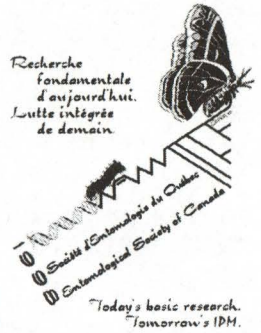
**Communications orales (régulière, Prix du Président, Prix Melville-Duporte):** 12 min + 3 min de discussion. Le seul équipement audiovisuel disponible sera un projecteur à diapositives Kodak. Les diapositives devront être placées dans un panier de projection avant la présentation.

**Affiches:** Dimensions maximales: 1m x 2m (largeur x hauteur)  
Montage sur panneaux: Velcro seulement

**Veuillez retourner à:** Michel Cusson (Président du programme scientifique) Service canadien des forêts, C. P. 3800, 1055 rue du P.E.P.S., Sainte-Foy (Québec), G1V 4C7; Téléphone: (418) 648-3944; Télécopieur: (418) 648-5849; Adresse électronique: [cusson@cfl.forestry.ca](mailto:cusson@cfl.forestry.ca)

**Joint Meeting of the  
Entomological Society of Canada and the  
Entomological Society of Québec**

Le Château Frontenac, Quebec City (Quebec), 31 October - 4 November  
1998



**ACTIVITIES FOR PARTICIPANTS AND THEIR GUESTS  
SUNDAY, NOVEMBER 1st: RALLY**

Spend an afternoon discovering the secrets of old Quebec and fall under the spell of the charm and warmth of its people. To help you learn about the diversity of the city's architecture, the majesty of its geographical setting, the uniqueness of its fortifications and the history of this jewel in the world's heritage crown, we've organized a rally. So come and join a team and compete for fun and prizes.

**MONDAY, NOVEMBER 2nd: "GALERIES DE LA CAPITALE"  
SHOPPING CENTRE**

For the ultimate shopping experience, embark on this excursion to the Galeries de la Capitale, departing at 9:30. Enjoy a leisurely browse through some of the 250 boutiques followed by a stop at your choice of 30 restaurants. During the day, why not stop at the IMAX theater, go for a skate at the indoor skating rink or take in a recent movie at the Cinéma. Fee for transportation (~\$5). Optional activities will be offered on site. Skate rental available at the rink.

**TUESDAY, NOVEMBER 3rd: ILE D'ORLEANS AND CHUTE MONTMORENCY**

Depart at 9:30 for a great tour! First stop will be the Chute Montmorency, an 83-m-high water fall in all its natural splendor. Then, we'll continue on to the Île d'Orléans, an island set off Quebec City in the St. Lawrence River and which constitutes the largest historic area in Quebec. There, owners of the Ferme Monna, a black currant farm, will greet us with a glass of wine. Since no visit in Quebec would be complete without a stop at a sugar house, we'll take you for a traditional meal and maple taffy on snow at the Cabane à sucre L'Entailleur. So, join us for an encounter with architecture, history, craftsmanship, and the St. Lawrence River. The fee (\$25) includes transportation and lunch.

**MANY SUGGESTIONS FOR RESTAURANTS, BARS, PUBS AND OTHER ACTIVITIES WILL  
BE AVAILABLE ON SITE AT ALL TIMES**

*For further information please contact:*

Michèle Roy  
Centre de recherche et d'expérimentation  
en régie et protection des cultures,  
Complexe scientifique, D1.110  
Ste-Foy, Quebec, G1P 3W8  
Telephone: (418) 643-9729  
Fax: (418) 646-6855  
E-mail: michele.roy@agr.gouv.qc.ca



**Réunion Conjointe de la  
Société d'entomologie du Canada  
et de la Société d'entomologie du Québec**

Le Château Frontenac, Québec (Québec), 31 octobre - 4 novembre 1998

**ACTIVITÉS POUR LES PARTICIPANTS ET LEURS INVITÉS**

**DIMANCHE, 1er NOVEMBRE: RALLYE**

En après-midi, partez à la découverte de la vieille Capitale. Laissez-vous tenter par la chaleur de ses gens, la diversité de son architecture, la splendeur de son paysage, ses fortifications uniques en Amérique du Nord et l'histoire de ce Joyau du patrimoine mondial. Nous vous proposons un rallye en équipe aussi divertissant qu'enrichissant au coeur du Vieux-Québec. Venez vous joindre à une équipe et compétitionner pour le plaisir et pour des prix.

**LUNDI, 2 NOVEMBRE: GALERIES DE LA CAPITALE**

Départ 9h30 pour les Galeries de la Capitale. Le rendez-vous parfait pour le magasinage! Plus de 250 boutiques et 30 restaurants sont là pour vous faire plaisir. Une grande variété. Pour se reposer, au cours de la journée, le théâtre IMAX, la patinoire des Galeries et le Cinéma vous proposent le divertissement complet. Frais de transport (~5\$). Activités facultatives et location de patins si désirée.

**MARDI, 3 NOVEMBRE: ÎLE D'ORLÉANS ET CHUTE MONTMORENCY**

Départ 9h30 pour la grande tournée! La chute Montmorency, haute de 83 m., lieu de notre premier arrêt, nous dévoile toute sa splendeur naturelle. Ensuite, l'Île d'Orléans, le plus gros arrondissement historique au Québec, s'ouvre à nous. La ferme Monna, où la culture du cassis s'implante, nous accueille avec un verre de vin! Dîner traditionnel à la Cabane à sucre l'Entailleur et dégustation de tire sur neige. Une rencontre avec l'architecture, l'histoire, les artisans et le fleuve St-Laurent. Frais de transport et de repas (25\$).

**PLUSIEURS SUGGESTIONS DE RESTAURANTS, BARS/PUBS ET AUTRES ACTIVITÉS  
SERONT DISPONIBLES SUR PLACE EN TOUT TEMPS**

*Pour de plus amples informations veuillez communiquer avec:*

Michèle Roy  
Centre de recherche et d'expérimentation  
en régie et protection des cultures,  
Complexe scientifique, D1.110  
Ste-Foy, Québec, G1P 3W8  
Téléphone: (418) 643-9729  
Télécopieur: (418) 646-6855  
Adresse électronique: michele.roy@agr.gouv.qc.ca



Joint Meeting of the  
Entomological Society of Canada and the  
Entomological Society of Québec

Le Château Frontenac, Quebec City (Quebec), 31 October - 4 November  
1998

FOURTH ANNUAL CANADIAN LINNAEAN GAMES

The ESC-ESQ Joint Meeting Organizing Committee and the SAC are planning a bilingual version of the fourth annual Linnaean Games. The games involve teams of four people competing against each other to answer questions about entomology. They have been a great success in past years. The primary goal is to provide an activity for students at meetings that is both educational and entertaining. The games are named after Carolus Linnaeus, to recognize his contributions to entomology. For more information about the history and the rules of the games, refer to the Bulletin of the Entomological Society of America (now American Entomologist), 31(3):5-6.

The preliminary round of the games in Quebec City are scheduled for Sunday, November 1st at 17:00 and the finals are scheduled for Monday, November 2nd at 17:30. Subject areas for questions will include: behavior, Canadian entomological current events and history, crop protection, ecology, forestry, morphology, physiology, taxonomy, and toxicology. Questions will be presented orally and visually, with the aid of slides.

The Student Affairs Committee invites student members of the E.S.C. to register, either as a team of four people, or as individuals (so we can put you on a team). Depending on the response, there may be space available for a "drop-in" team to be filled at registration. Please send your response by August 1, 1998.

Linnaean Games Registration Form

Name of team:.....  
Institution: .....  
Team members: .....

or:

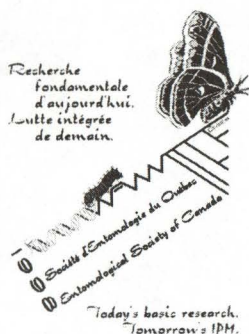
Name of individual: .....  
Institution: .....

Please return this form to:

The Logo

André Bouchard, Pavillon de l'Environnement  
2480, boul. Hochelaga, Sainte-Foy,  
(Quebec), G1K 7P4  
Telephone: (418) 656-2131 poste 8873  
Fax: (418) 656-7871  
E-mail: andre.bouchard@plg.ulaval.ca

The logo incorporates the themes of the three symposia, paying a tribute to *Hyalophora cecropia*. This insect's natural beauty is unquestionable and studies on different aspects of its life cycle have greatly contributed to our general entomological knowledge. The logo is the work of Claude Everaerts, a researcher with C. N. R. S. in Dijon, who was on sabbatical leave at Laval University, in 1997.





Réunion Conjointe de la  
Société d'entomologie du Canada  
et de la Société d'entomologie du Québec

Le Château Frontenac, Québec (Québec), 31 octobre - 4 novembre 1998

QUATRIÈMES JEUX ANNUELS LINNÉENS CANADIENS

Le comité organisateur de la réunion conjointe de la SEC-SEQ et le comité des affaires étudiantes organisent une version bilingue des quatrièmes jeux linnéens canadiens. Le jeu met en compétition des équipes de quatre joueurs qui doivent répondre à des questions d'entomologie. Ces jeux ont connu un grand succès dans le passé. Le but principal des jeux est de donner aux étudiant(e)s qui sont à la réunion l'occasion de participer à une activité à la fois éducative et divertissante. Les jeux sont nommés en l'honneur de Carl von Linné afin de reconnaître sa contribution au domaine de l'entomologie. Pour de plus amples renseignements sur l'histoire et les règles du jeu, veuillez consulter le Bulletin de la Entomological Society of America (American Entomologist), 31 (3):5-6.

La manche préliminaire des jeux de Québec est prévue pour dimanche, le 1er novembre à 17h00 et la finale pour lundi, le 2 novembre à 17h30. Les questions porteront sur les sujets suivants: le comportement, les événements actuels et l'histoire de l'entomologie canadienne, la protection des plantes, l'écologie, la morphologie, la physiologie, la taxonomie et la toxicologie. Les questions seront posées sous formes orale et visuelle à l'aide de diapositives.

Le comité des affaires étudiantes invite tous les membres étudiants de la SEC à s'inscrire en équipe de quatre personnes ou individuellement (nous nous chargerons de vous placer dans une équipe). Il est possible qu'il y ait des places disponibles pour former une équipe improvisée au moment de l'inscription. Veuillez faire parvenir votre réponse avant le 1er août 1998.

Formulaire d'inscription: Jeux Linnéens canadiens

Nom de l'équipe: .....

Institution: .....

Nom des membres: .....

.....

.....

.....

ou:

Nom (personne seule): .....

Institution: .....

Veuillez retourner à:

Le Logo

André Bouchard, Pavillon de l'Environnement  
2480, boul. Hochelaga, Sainte-Foy,  
(Québec), G1K 7P4  
Téléphone: (418) 656-2131 poste 8873  
Télécopieur: (418) 656-7871  
Adresse électronique: andre.bouchard@plg.ulaval.ca

Le logo représente les thèmes des trois symposia et rend hommage à *Hyalophora cecropia* dont la beauté naturelle est incontestable. De plus, l'étude de différents aspects de son cycle de vie a grandement contribué à notre connaissance générale de l'entomologie. Le logo est l'oeuvre de Claude Everaerts, un chercheur du C.N.R.S. à Dijon qui était en année sabbatique à l'Université Laval, en 1997.



**Entomological Society of Canada/Société d'entomologie du Canada  
Committees and Representatives for 1997-1998/Comités et représentants 1997-1998**

**A-Standing Committees/Comités permanents**

*Nominating/Nominations*

S.A. Marshall, Chair, Guelph  
B. Heming, Edmonton  
J. Sweeney, Fredericton  
H.V. Danks, ex officio, Ottawa

*Elections/Elections*

J.E. Corrigan, Chair, Guelph  
Two members to be appointed  
H.V. Danks, ex officio, Ottawa

**B-Continuing Committees/Comités en cour**

*Achievement Awards/Prix d'excellence*

L.A. Gilkeson, Chair, Brentwood Bay  
V.M. Behan-Pelletier, Ottawa  
C. Hébert, Québec  
R.A. Ring, Victoria  
R.F. Smith, Kentville  
S. Smith, Toronto  
H.V. Danks, ex officio, Ottawa

*Bilingualism/Bilinguisme*

J. Delisle, Chair, Québec  
J. Brodeur, Québec  
M. Cusson, Québec  
H.V. Danks, ex officio, Ottawa

*Bylaws, Rules and Regulations/Règlements*

G.H. Gerber, Chair, Winnipeg  
N.J. Holliday, Winnipeg  
M. Goettel, Lethbridge  
H.V. Danks, ex officio, Ottawa

*Finance/Finance*

J.E. O'Hara, Chair, Ottawa  
J.-F. Landry, Ottawa  
D. Parker, Ottawa  
T.A. Wheeler, Ste-Anne-de-Bellevue  
H.V. Danks, ex officio, Ottawa  
G.A.P. Gibson, ex officio, Ottawa

*Headquarters/Siège social*

B.D. Gill, Chair, Ottawa  
J.M. Cumming, Ottawa  
H.V. Danks, ex officio, Ottawa  
G.A.P. Gibson, ex officio, Ottawa

*Heritage/Héritage*

R. DeBoo, Chair, Victoria  
E.C. Becker, Ottawa  
D.C. Eidt, Fredericton  
P. Riegert, Regina  
C. Wood, British Columbia  
H.V. Danks, ex officio, Ottawa

*Insect Common Names/Noms communs d'insectes*

E. Belton, Chair, Burnaby  
Two members to be appointed  
H.V. Danks, ex officio, Ottawa

*Marketing/Comité du marketing*

L.M. Dosdall, Vegreville  
T.P. Danyk, Lethbridge  
K. Floate, Lethbridge  
D.R. Gillespie, Agassiz  
H.V. Danks, ex officio, Ottawa

*Membership/Adhésion*

D.W. Langor, Chair, ESA, Edmonton  
Troy Danyk, Lethbridge  
R.F. Smith, AES, Kentville  
T.L. Shore, ESBC, Victoria  
R.J. Lamb, ESM, Winnipeg  
D.B. Lyons, ESO, Sault-Ste-Marie  
O. Olfert, ESS, Saskatoon  
C. Cloutier, SEQ, Québec  
H.V. Danks, ex officio, Ottawa

*Publications/Publications*

S.M. Fitzpatrick, Chair, Agassiz  
C. Cloutier, Québec  
D.C. Eidt, Fredericton  
A.B. Ewen, Dalmeny  
A. Keddie, Edmonton  
P.G. Mason, Saskatoon  
H. Barclay, ex officio, Victoria  
V.M. Behan-Pelletier, ex officio, Ottawa  
H.V. Danks, ex officio, Ottawa  
P.G. Kevan ex officio, Guelph (until Jan. 1998)  
J. Turgeon, ex officio, Sault-Ste-Marie (from Jan. 1998)

*Science Policy and Education/Politique scientifique et éducation*

J.R. Spence, Chair, Edmonton  
K.G. Davey, Downsview  
R.F. Smith, AES, Kentville  
D.W. Langor, ESA, Edmonton  
T.L. Shore, ESBC, Victoria  
R.J. Lamb, ESM, Winnipeg  
D.B. Lyons, ESO, Sault-Ste-Marie  
O. Olfert, ESS, Saskatoon  
C. Cloutier, SEQ, Québec  
H.V. Danks, ex officio, Ottawa  
L.A. Gilkeson, ex officio, Brentwood Bay  
D.L. Johnson, ex officio, Lethbridge

*Student Affairs/Affaires étudiantes*

T.P. Danyk, Chair, Lethbridge  
D. Barrett, Fredericton  
D. Gingras, Montréal  
P. Lomic, Toronto  
H.V. Danks, ex officio, Ottawa  
S. Lindgren, ex officio, Prince George

*Student Awards/Prix aux étudiantes et étudiants*

S. Lindgren, Chair, Prince George  
D.C. Currie, Toronto  
L.H. Hollett, Corner Brook  
D.J. Larson, St. John's  
B.K. Mitchell, Edmonton  
D. Quiring, Fredericton  
T.A. Wheeler, Ste-Anne-de-Bellevue  
H.V. Danks, ex officio, Ottawa

*Web/Web*

D.B. Lyons, Chair, Sault-Ste-Marie  
T.P. Danyk, Lethbridge  
D.L. Johnson, Lethbridge  
W. Riel, Victoria  
H.V. Danks, ex officio, Ottawa

**Call for Nominations - Second Vice President & Director-at-Large**

Nominations for Second Vice President and Director-at-Large must be signed by three members in good standing and received by **30 April 1998** by the Secretary, Dr. Rick West.

Nominations pour Deuxième Vice-Président et Directeur doivent être signée par trois membres de la Société et envoyée avant le **30 avril 1998** au secrétaire, Dr. Rick West.

**New Secretary for 1998**

With the retirement of Dr. Peggy Dixon, Dr. Rick West has agreed to once again take up the reigns as Secretary of the ESC. Rick served with distinction as Secretary from 1990 to 1995. Welcome back Rick!!!



## **ESC President's Report**

In this report, I highlight a few selected items, although the work of the Society continues on a broad front thanks to members and to ESC committees.

The change over of the Society's procedures for scientific publishing is now complete. All elements of the transfer of operations from a staff technical editor and separate printer to a contract with the National Research Council Research Press for all stages of production of *The Canadian Entomologist* have been completed, and issues of the journal are being produced on time under the new arrangements. The last volume of the *Memoirs of the Entomological Society of Canada* (no. 171) was published late in 1997. The final stages of its production (in the absence of a staff managing editor) were facilitated by the volume editors and by the Society's Administrative Assistant, Ms. Sandy Devine. The *Memoir*, concerning the microbial control of grasshoppers and locusts, is expected to attract wide interest, and additional copies were printed for sale, following an analysis by the Publications Committee. Members are invited to publicize the availability of this informative work. The Marketing Committee has been active in advertising the volume, as well as the book on diseases and pests of vegetable crops in Canada and other Society publications.

Decisions made by the ESC following the recent Strategic Review led to the need to revise very substantially the Standing Rules and Committee Guidelines. The major task of revision was undertaken last year by Dr. George Gerber, Chair of the Bylaws, Rules and Regulations Committee, and key results of this work and subsequent deliberations of the Governing Board were approved by the membership at the 1997 Annual General Meeting. Following comments by Board members on a "final" version, the revised Society Bylaws, Standing Rules and Committee Guidelines are in place. (Two sections of the Standing Rules still have to be finalized and approved to reflect later results of the Strategic Review.) The revised Bylaws and Standing Rules are currently being translated into French.

Most of the Affiliated Societies held successful annual meetings after the ESC held its joint annual meeting with the Entomological Society of Alberta in Edmonton on October 4-8. That joint meeting was exceptionally well organized and successful, thanks to the local arrangements and scientific program organizers. The Entomological Society of British Columbia met in Agassiz on October 29, the Société d'entomologie du Québec in St.-Jean-sur-Richelieu on November 6-7, the Entomological Society of Manitoba in Winnipeg on November 7-8 (I was fortunate to be able to attend that excellent meeting as ESC President), The Entomological Society of Ontario in London on November 7-8, and the Entomological Society of Saskatchewan in Saskatoon on November 13. The Acadian Entomological Society had already met in Kentville, Nova Scotia, on August 10-12. Current officers of the affiliated societies are listed in this Bulletin (inside back cover).

There are recent changes in very important positions within our Society. As already announced, the new Scientific Editor is Dr. Jean Turgeon, who took over from Dr. Peter Kevan on January 1, 1998 (although Peter continues to handle manuscripts submitted during his tenure, those with manuscript numbers bearing the prefix 97- or lower). We are very grateful to Peter for his years of service, and we welcome Jean into the editorship. As announced in the last Bulletin, Dr. Peggy Dixon is stepping down as Secretary of the Society. Following a notification and call for volunteers published in the last Bulletin, I am very happy to announce that Dr. Rick West will be taking over as Secretary in mid-February 1998. Rick

served with distinction as Secretary from 1990 until 1995, so that a smooth transition can be expected. It gives me great pleasure to acknowledge Peggy's fine service as Secretary over more than 3 years, and to welcome Rick back into this important job.

The Society's Web page continues to develop, and is accessible at <http://www.biology.ualberta.ca/esc.hp/homepage.htm>. It includes information about the Society and its publications, order forms, and many other topics of interest.

A number of other items have arisen in the last few months, among them (apart from routine correspondence) certain issues related to Student Award Committee guidelines, future Annual Meetings, and The Canadian Entomologist. Matters requiring further attention will be dealt with at meetings of the Executive Council or the Governing Board.

Last but not least, it is my pleasure to thank all those who readily agreed to chair or to serve on the ESC's committees. Their willingness greatly facilitated the task of staffing the many committees that had been substantially reorganized as a result of the Strategic Review.

H.V. Danks  
Ottawa, Ontario



### **SEC Rapport du Président**

Dans ce rapport, je ne souligne que certains sujets particuliers, même si la Société mène de fronts plusieurs dossiers grâce à l'aide de ses membres et de ses comités.

Jusqu'à récemment, la production du Canadian Entomologist était le fruit du travail conjoint de notre propre réviseur technique et d'un imprimeur indépendant. Maintenant, toutes les étapes de la production sont confiées à la Presse du CNR en vertu d'un contrat. Nous avons terminé la transition de l'ancien au nouveau mode de production et les dates de parution de la revue n'ont pas été affectées. Le dernier numéro des Memoirs of the Entomological Society of Canada (no 171) a été publié tardivement en 1997. Les étapes finales de sa production (en l'absence d'un directeur de la rédaction) ont été facilitées grâce aux éditeurs du volume et de l'assistant administratif de la Société, Mme Sandy Devine. On s'attend à ce que le Memoir, traitant du contrôle microbiologique des sauterelles et des criquets, soulève un grand intérêt. Des copies additionnelles ont donc été imprimées pour la vente, suite à une analyse du Comité des publications. Les membres sont invités à faire de la publicité concernant la disponibilité de cet ouvrage d'information. Le comité du marketing a participé à la publicité de ce volume et de celui sur les maladies et les ravageurs des végétaux au Canada ainsi que les autres publications de la Société.

Les décisions qui ont été prises par la Société à la suite de la récente revue stratégique ont nécessité une révision substantielle des Règles permanentes et des Lignes Directrices pour les Comités. Une partie importante de cette révision a été réalisée l'année dernière par le Dr George Gerber, Président du comité des Statuts, Règles et Règlements, et les résultat-clés de ce travail ainsi que les discussions subséquentes du conseil d'administration ont été approuvés par les membres à la réunion annuelle de 1997. Suite aux



commentaires des membres de la direction sur la version "finale", la révision des Statuts de la société, les Règles permanentes et les Lignes Directrices pour les Comités sont maintenant en place. (Deux sections des Règles permanentes doivent encore être complétées et approuvées afin de refléter les derniers résultats de la revue stratégique). La traduction en français des versions révisées des Statuts et Règles permanentes est présentement en cours.

La plupart des sociétés régionales ont tenu avec succès leurs réunions annuelles suite à celle de la SEC tenue conjointement avec la Société d'entomologie de l'Alberta à Edmonton du 4 au 8 Octobre. Cette réunion conjointe était exceptionnellement bien organisée et réussie grâce au travail du comité organisateur local et des responsables du programme scientifique. La Société de la Colombie britannique s'est réunie à Agassiz le 29 Octobre, celle du Québec à St-Jean-sur-Richelieu les 6-7 Novembre, celle du Manitoba à Winnipeg les 7-8 Novembre (J'ai eu la chance d'avoir pu assister à cette excellente réunion comme président de la SEC), celle de l'Ontario à London les 7-8 Novembre et celle de la Saskatchewan à Saskatoon le 13 Novembre. La Société d'entomologie de l'Acadie s'était déjà réunie à Kentville, en Nouvelle Ecosse, du 10 au 12 Août. La liste des membres du conseil d'administration de chacune de ces sociétés est publiée dans le Bulletin (à l'endos de la couverture arrière).

Il y a eu des changements de poste importants dans la Société. Comme nous l'avons déjà annoncé, le nouveau rédacteur scientifique, le Dr Jean Turgeon, a pris la relève du Dr Peter Kevan le 1er Janvier 1998 (bien que Peter continue de s'occuper des manuscrits soumis durant son mandat, soit ceux dont le numéro de manuscrit débute par 97 ou un nombre plus petit). Nous sommes très reconnaissants envers Peter pour ses années de service et nous souhaitons la bienvenue à Jean comme rédacteur. Tel qu'annoncé dans le dernier Bulletin, le Dr Peggy Dixon a quitté ses fonctions de Secrétaire de la Société. À la suite d'un avis et d'un appel aux bénévoles parus dans le dernier Bulletin, je suis très heureux d'annoncer que le Dr Rick West prendra la relève comme secrétaire à la mi-février 1998. Comme Rick a déjà occupé ce poste avec distinction de 1990 à 1995, l'ajustement devrait se faire assez facilement. C'est avec grand plaisir que je remercie Peggy pour ses bons services comme secrétaire pendant plus de trois ans et je souhaite à nouveau la bienvenue à Rick dans cette importante fonction.

Le site Web de la Société continue à se développer et il peut être consulté à l'adresse <http://www.biology.ualberta.ca/esc.hp/homepagf.htm>. Sur ce site on y trouve de l'information sur la Société et ses publications, les formulaires ainsi que plusieurs autres sujets d'intérêt.

D'autres sujets ont été soulevés au cours des derniers mois, parmi lesquels (mis à part la correspondance habituelle) sont apparus certaines questions concernant les Lignes Directrices du Comité des Affaires Étudiantes, les prochaines réunions annuelles et le Canadian Entomologist. Tout autre sujet nécessitant plus d'attention sera discuté lors des réunions du Conseil exécutif ou celles du conseil d'administration.

La dernière chose mais non la moindre, c'est avec plaisir que je remercie tous ceux qui ont accepté de présider ou d'aider dans les comités de la SEC. Leur bonne volonté facilite grandement le travail de dotation du personnel de plusieurs comités, lesquels ont été substantiellement réorganisés à la suite de la revue stratégique.

H. V. Danks,  
Ottawa, Ontario



## NEWS OF ORGANIZATIONS

### Biological Survey of Canada (Terrestrial Arthropods)

The Survey's expert Scientific Committee met in Hull on 23-24 October, 1997.

#### Scientific Projects

##### 1. *Arthropod fauna of the Yukon*

Dr. Hugh Danks summarized the production of the book on Insects of the Yukon, pointing out that many problems and delays were experienced during the printing process and considerable time was required to solve them in addition to indexing, preparation of the final chapter, problems with certain illustrations, translation of abstracts, invoicing, fundraising and other matters. However, the book had now been published by the Biological Survey Foundation.

A significant number of donations and sponsorships had been received and also page charges came from various authors or their institutions, so that the project is financially sound.

Based on experience with the Yukon volume, Dr. Danks emphasized that more advanced planning will be required for future publications in terms of editorial personnel, fundraising, and contingency planning. Because this project fell behind and was on the verge of failing, taking it over was very onerous. The Committee agreed to apply a better system for dealing with obstacles and delays in planning for future projects.

##### 2. *Arthropods of Canadian grasslands*

Dr. Bert Finnermore reported that work had continued on Alberta grasslands. Sorting of material continues and specimens are going out to specialists for identification. Formal participation in the grasslands project, including broad studies elsewhere, will soon be invited aiming for an eventual publication. Interesting habitat and other patterns are becoming visible as the data accumulate and can be analyzed.

A major arthropod component in investigation of the giant bamboo "grasslands" in Peru is also being developed.

##### 3. *Arctic invertebrate biology*

Dr. Richard Ring reported that arctic invertebrate research continues at a slow pace, but includes the Survey's annual newsletter Arctic Insect News and various forms of cooperation between scientists in Canada and elsewhere.

##### 4. *Other projects*

Other projects were reviewed, including a report on progress with the preparation of illustrations for keys to the families of Canadian arthropods.

#### Other scientific priorities

##### 1. *Arthropod fauna of soils*

Dr. Valerie Behan-Pelletier reported especially on a Database of Ecological Research Projects at

[http://www.kimana.com/nexus/derp/derp\\_for.htm](http://www.kimana.com/nexus/derp/derp_for.htm). The site would soon be available to help in integrating relevant studies.

A larger number of Canadians than in the recent past are now working on microarthropods. Even so, 50% of the oribatid fauna in Japan is known, for example, compared with a much smaller percentage in Canada (even with its much smaller fauna), and few people are doing taxonomy and systematics in this area. Basic research in both taxonomy and ecology is much better supported in Japan.

## *2. Invasions and reductions*

A Survey workshop on invasions and reductions in the year 2000 is still being evaluated by Dr. Steve Marshall. The Canadian Nature Federation's lady beetle survey attempts to involve the public in documenting changing faunas, and so add to scientific knowledge. However, several of the distribution maps produced as a result of the survey conflict with other data, emphasizing the need for voucher specimens and providing an opportunity to determine the scientific value of such a public survey.

## *3. Internet connections*

The Committee reviewed a summary of the structure of the Survey's web site at <http://www.biology.ualberta.ca/esc.hp/bschome.htm>.

## *4. Insects and wildlife management*

The Survey had contributed a short section on insects for the Wildlife Management Plan for the Yukon North Slope, highlighting groups that are important to the local vertebrate fauna (such as biting flies and potential food items), as well as insect species or habitats of potential conservation interest.

## *5. Other priorities*

The Committee considered recent information about other current priorities, such as endangered species, damaged ecosystems, old-growth forests, Survey funding, potential publicity avenues (a poster about the Survey would be prepared for the national meeting of the Ecological Monitoring and Assessment Network in January 1998), faunal analysis, infrastructure support for collections, and other ongoing projects.

# **Liaison and exchange of information**

## *1. Canadian Museum of Nature*

Ms. Joanne DiCosimo, President of the Canadian Museum of Nature, reported that the Museum is focusing on planning for the future, especially in defining its national role, and as part of that process is organizing a series of consultation sessions across the country, which will include discussions about working cooperatively.

Dr. Mark Graham, Director of Research, highlighted some of the work at the Museum including the consolidation of collections, a collections management information system, the National Biodiversity Information Initiative, and the Federal Biosystematics Partnership (a new name for the Federal Biosystematics Group). The Partnership is promoting training in systematics at universities and is also planning for a list of Canadian species. Two research positions are being recruited at the Museum, including a zoologist with expertise in molecular systematics. A summer school in biodiversity and systematics was held for the second time in 1997 (a third one is planned), and an arctic natural history summer school was held in Cambridge Bay. Ms. Anne Breau, Canadian Centre for Biodiversity, announced that Global Biodiversity recently published an ecoforestry issue. An article about parasitology in an upcoming issue



stems from discussions associated with the April meeting of the Committee.

In response to a query as to why the Museum is emphasizing molecular systematics at a time when whole organism research is faltering, Dr. Graham explained that the Museum's only researcher with a background in DNA work is a botanist and he wanted to have at least one zoologist in-house with that expertise.

## 2. *Biological Resources Program, ECORC*

Dr. Jim McKenzie, Program Manager, Biological Resources Program, reported that since the last meeting of the Committee he has been working to highlight the valuable systematics research that is done at ECORC and helping his organization to understand that. He emphasized that the enormous value of systematics is the best kept secret in the country. Dr. McKenzie described examples of the experts and their work. Collaboration is a major focus of the work of the program.

A new position in biocontrol will be filled in the next six months aimed primarily to link systematic and biocontrol work. Agriculture is working with Forestry to try to address the need for an ichneumonid specialist. Support from partners and clients showing that systematics adds value to research projects across the country is important.

In response to the suggestion that the emphasis at ECORC seems to be on technology transfer, whereas research in systematics is needed to learn about unknown species, Dr. McKenzie replied that the reality is that there are insufficient funds to go around. Scientists must compete for funding within their own organization, and this necessitates demonstrating that someone will use the technology. There has to be a balance between technology transfer and basic research. If outside money is received there will be more opportunities to do basic systematics research.

Dr. McKenzie maintains a mailing list so that leaders in the community can be kept informed of what the Biological Resources Program is doing. There are plans to form an advisory committee.

## 3. *Entomological Society of Canada*

Dr. Steve Marshall, Entomological Society of Canada, reported on trends in the Society that reflect the erosion in the country's systematics infrastructure. For example, this will be the last year for the Memoir series, a highly respected monographic series that contained many systematic revisions. Over the past year, the Society's publications procedures have been restructured in other ways. The publication of *The Canadian Entomologist* is now being handled by the National Research Council Research Press on a contractual basis, a cost-effective arrangement. He also noted the ESC's excellent web page linked to the Biological Survey's web pages.

## 4. *Canadian Forest Service*

Dr. John Huber, Canadian Forest Service, reported that the Newfoundland Forestry collection will be moved to Cornerbrook where the new Forestry facility is being set up. A list of the 2000 species from Newfoundland in that collection has just been completed. Two collections managers have been hired at CFS so that each of the five Forestry collections now has a collections manager. A new CFS Biosystematics Working Group is being established to improve the communication and coordination of systematics activities. Also, the CFS Biodiversity Network met for the first time, generating ideas (such as updating the information base which was formerly FIDS) to be forwarded to the Biosystematics Working Group. Dr. Huber concluded that these various CFS initiatives show moral support for systematics although the source of funding is uncertain.



5. *Committee on the Status of Endangered Wildlife in Canada (COSEWIC)*

Dr. Teresa Aniskowicz, Chair of the COSEWIC subcommittee that deals with Lepidoptera and molluscs, reported that at the last meeting of COSEWIC three species of butterflies were listed: the Karner Blue as extirpated; the Maritime Ringlet as endangered; and the Monarch butterfly as vulnerable. The Monarch is still numerous in Canada but its very small winter range is subject to many pressures. Reports on other butterfly species have been commissioned. An Internet site for COSEWIC should be operational in a few months. COSEWIC mechanisms will have to change, beyond the current set-up of subcommittees, if endangered species legislation is passed reflecting the draft legislation.

6. *Canadian Wildlife Service*

Dr. Aniskowicz, Biodiversity Protection Branch, Canadian Wildlife Service, reminded the Committee that the endangered species legislation was close to being passed when the previous government was dissolved. The legislation may be reintroduced next spring.

Dr. Patricia Roberts-Pichette, Executive Secretary, Canada/MAB, reported that the UNESCO program on Man and the Biosphere (MAB) is undergoing a revitalization, building on the MAB philosophy that humans are part of the environment and ecosystem.

The MAB program has become embedded in the Ecological Monitoring and Assessment Network; several current initiatives were started by people involved with MAB. Dr. Roberts-Pichette believes there is now an opportunity, with all the biosphere reserves being part of EMAN sites and therefore ecological science cooperatives, for second and third generation initiatives to occur in "safe environments". EMAN's 1998 national meeting will include sessions on the Canada/MAB program.

8. *Parasitology module, Canadian Society of Zoologists*

Dr. David Marcogliese, Parasitology section, stated that a report on the parasitology group's perch project will soon appear. The stickleback project is generating considerable enthusiasm and sampling activity. Various parasitology protocols for EMAN are being developed. Dr. Marcogliese noted that many government departments are not coordinating their efforts in the implementation plans for the Canadian Biodiversity Strategy. Reflecting the erosion of Canada's publishing capacity, the Canadian Journal of Fisheries and Aquatic Sciences no longer has a permanent editorial staff, but relies solely on volunteer editors.

Dr. Marcogliese had concluded that influence on national bodies is most effective if it comes through an international group. The international action then prompts Canada into a domestic response.

9. *Geological Survey of Canada*

The Committee learned with dismay that the Quaternary Palaeoecology section at the Geological Survey has been disbanded, and its staff declared surplus.

10. *National Biodiversity Information Initiative*

Mr. Larry Speers, Coordinator, National Biodiversity Information Initiative, outlined that Initiative for the Committee. He asserted that currently systematic research and biological data sets are being treated as a cottage industry, with no cohesive sharing of information within the community. The technology is now available to deal with vast amounts of information, and complex biological data must now be fed into datasets of a scale that allow the complexity to be dealt with.

A recent workshop on establishing a Canadian biodiversity data policy framework led to formation

of the National Biodiversity Information Initiative, intended to increase national ability to access authoritative biodiversity information electronically by facilitating the formation of a distributed federation of Canadian partners with the content, expertise, tools and willingness to share biodiversity data electronically. A first fact-finding phase is in progress, including potential pilot projects to demonstrate the value of these approaches and to bring in a number of sectors of the community. Such pilot projects need to acquire excellent data sets as well as handle them.

## Other items

### 1. Regional developments

Information from different regions of Canada was reviewed. For example, in British Columbia, many graduate students are working on projects related to biodiversity at the province's universities. A report on the Brooks Peninsula (an ice age refugium on Vancouver Island) has been published, including a chapter dealing with the insects. In the prairies, considerable effort has been spent in developing the various EMAN sampling protocols. Faunal work in the prairies includes especially forest and tall-grass prairie biodiversity. In Ontario, several faunal projects continue from the University of Guelph and elsewhere, and a publication on the insects of Algonquin Park has appeared. In Quebec, the CFS collection is being moved into larger facilities. Several research projects on diversity or systematics are underway, notably from CFS and from Macdonald College. A list of the Lepidoptera of Quebec is in press. Studies of dragonflies and other entomological activities continue in the Atlantic provinces. Discussions about collections in the St. John's area are continuing. With respect to the Arctic region, a recent article links an active northern studies program with Canada's credibility in the world, especially among the other circumpolar nations.

### 2. Other matters

The Committee also considered matters such as membership of the Scientific Committee (several members retired by rotation), operations of the Biological Survey Secretariat, and liaisons with and information about organizations outside Canada.

H.V. Danks  
Ottawa, Ontario

## International Commission on Zoological Nomenclature

### Applications published in the Bulletin of Zoological Nomenclature

The following Applications were published on 18 December 1997 in Vol. 54, Part 4 of the Bulletin of Zoological Nomenclature.

#### **Case 3009    *Polyrhachis* Smith, 1857 (Insecta, Hymenoptera): proposed precedence over *Myrma* Billberg, 1820**

Wolfgang H.O. Dorow. *Forschungsinstitut Senckenberg, Senckenberganlage 25, 60325 Frankfurt am Main, Germany*

Rudolf J. Kohout. *Queensland Museum, PO Box 3300, South Brisbane, Queensland 4101, Australia*

Robert W. Taylor. *Australian National Insect Collection, CSIRO, GPO Box 1700, Canberra, A.C.T. 2601, Australia*

**Abstract.** The purpose of this application is to conserve the generic name *Polyrhachis* Smith, 1857 for a prominent Old World and Australasian ant genus (family FORMICIDAE) by giving it precedence over the senior subjective synonym *Myrma* Billberg, 1820, which has been sometimes used for a subgenus of *Polyrhachis*. The genus *Polyrhachis* includes about 500 species and subspecies, found mostly in the tropics and sub-tropics but a few species extend the range northwards into Japan, Korea, central China and the Middle East.

**Keywords.** Nomenclature; taxonomy; Hymenoptera; FORMICIDAE; ants; *Polyrhachis*; *Myrma*.

**Case 2924 MELOIDAE Gyllenhal, 1810 and NEMOGNATHINAE Castelnau, 1840 (Insecta, Coleoptera): proposed precedence over HORIIDAE Latreille, 1802**

M.A. Bologna. *Dipartimento di Biologia, Università degli Studi Roma Tre, Viale Marconi 446, 00146 Roma, Italy*

J.D. Pinto. *Department of Entomology, University of California, Riverside, Ca. 92521, U.S.A.*

**Abstract.** The purpose of this application is to conserve the blister beetle names MELOIDAE Gyllenhal, 1810 (type genus *Meloe* Linnaeus, 1758) and NEMOGNATHINAE Castelnau, 1840 (type genus *Nemognatha* Illiger, 1807) by giving them precedence over HORIIDAE Latreille, 1802 (type genus *Horia* Fabricius, 1787). The family-group name ZONITINAE Mulsant, 1857 (type genus *Zonitis* Fabricius, 1775) is corrected to ZONITIDINAE.

**Keywords.** Nomenclature; taxonomy; Coleoptera; blister beetles; MELOIDAE; NEMOGNATHINAE; HORIIDAE; ZONITIDINAE.

**Case 3046 *Papilio sylvanus* Esper, [1779] (currently known as *Ochlodes venata* or *Augiades sylvanus*; Insecta, Lepidoptera): proposed conservation of the specific name**

A.L. Devyatkin. *Department of Entomology, Faculty of Biology, Moscow State University, 119899 Moscow, Russia*

**Abstract.** The purpose of this application is to conserve the specific name of *Papilio sylvanus* Esper, [1779] (currently known as *Ochlodes venata* or *Augiades sylvanus*) for the Large Skipper (family HESPERIIDAE), one of the commonest butterflies in Europe and widely distributed throughout the Palaearctic. The species was known exclusively as *sylvanus* for more than 150 years, mostly in the combination *Augiades sylvanus*. The name is formally a junior primary homonym of *Papilio sylvanus* Drury, 1773, in use for the past 150 years as *Anthene sylvanus* for a West African hairtail butterfly (family LYCAENIDAE). The two species have not been considered congeneric since *Papilio* was used for all butterflies in the 18th century. The name *Ochlodes venata* (Bremer & Grey, 1853) has been used for *P. sylvanus* Esper in recent decades but this relates to a separate species from China.

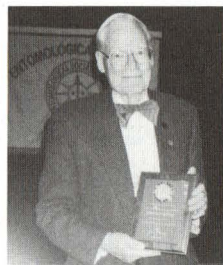
**Keywords:** Nomenclature; taxonomy; Lepidoptera; butterflies; HESPERIIDAE; LYCAENIDAE; skippers; hairtails; *Augiades sylvanus*; *Ochlodes sylvanus*; *Ochlodes venata*; *Anthene sylvanus*.



## PERSONALIA

Recently, Dr. Ed Becker, one of the pillars of the Entomological Society of Canada, was elected a Fellow of the Entomological Society of America. We think that he is the first and only Canadian entomologist to be a fellow of both societies. The award was given in Nashville at the annual meeting of the ESA.

Bernard Philogène



## POSITION AVAILABLE

**Assistant Professor.** The Department of Environmental Biology of the University of Guelph invites applications for the position of Assistant Professor, Entomology (tenure track). The incumbent will be expected to develop a teaching (50%) and research (50%) program in the area of crop protection entomology. Teaching will consist of responsibility for a senior level course in integrated pest management for students in agronomy, horticulture and agroecosystem management and collaboration with other faculty in a course in applied entomology or a course involving issues in crop protection to undergraduate and graduate students. In addition to directing graduate student research, the incumbent will assume responsibilities for crop protection research in field and/or vegetable crops in collaboration with specialists in crop pathology, weed science and crop breeding in the Departments of Environmental Biology and Plant Agriculture and Biotechnology. These areas of research are partially supported by competitive grants through our agreement with the Provincial Ministry of Agriculture, Food and Rural Affairs. A Ph.D. in entomology or appropriate area of biological science is required. Applicants must have training and experience in research and teaching in crop protection entomology and pest management. Applicants with expertise in pesticide resistance management and population ecology are encouraged. Postdoctoral experience and evidence of securing competitive funding are desirable. The appointment will be available September 1, 1998. Salary will be commensurate with qualifications and experience of the appointee. Applications, including a resume, University transcripts, a statement of philosophy and interests in a career of teaching and research, reprints or other evidence of academic activities and three letters of reference should be sent before May 15, 1998 to Dr. M.K. Sears, Chair, Department of Environmental Biology, University of Guelph, Guelph, Ontario, N1G 2W1, Canada. FAX (519) 837-0442. Website: <http://www.OAC.uoguelph.ca/env/>.

In accordance with Canadian Immigration requirements, this advertisement is directed to Canadian citizens and permanent residents of Canada. This appointment is subject to final budgetary approval.

The University of Guelph is committed to an employment equity program that includes special measures to achieve diversity among its faculty and staff. We therefore particularly encourage applications from qualified aboriginal Canadians, persons with disabilities, members of visible minorities and women.

*E.S.C. Bulletin S.E.C.*  
**PUBLICATIONS**

**Book Reviews**

**Durden, L.A. and J.E. Keirans 1996. *Nymphs of the genus Ixodes (Acari: Ixodidae) of the United States: Taxonomy, identification key, distribution, hosts, and medical/veterinary importance.* Thomas Say Publications in Entomology: Monographs. Entomological Society of America, Lanham, MD. iv + 95 pp. Soft cover, \$(US) 25.50.**

This slender book is intended to provide a comprehensive, up-to-date guide to the nymphal instar of all 34 species of the tick genus *Ixodes* now known to be resident in the United States, and so to complement guides that are already available for the adults of all, and the larva of many, of these species. In addition to providing a dichotomous key and SEM images for identification of nymphs, it includes current information on synonymies, geographic distribution, host records, and synopses of medical/veterinary importance for all instars of these 34 species. United States distributional data include Alaska and Hawaii, and extralimital distribution for each species is also given. The latter is very useful, as all 23 species of *Ixodes* now known for Canada are treated, with Canadian records given for all of these but *Ixodes baergi* and *I. howelli*.

Special terms used for morphological structures in the key are adequately explained or shown by line figures in the introduction. The SEM figures are consistently superb, even though these images differ much from the aspect that users of this guide will have in viewing ticks through a stereomicroscope. These figures compensate for a key that is fraught with difficulties and inconsistencies, as the following examples will show. Indications of external coxal spurs are shown in the figures for *I. hearlei*, *I. marxi* and *I. texanus*, and of internal coxal spurs for *I. marxi* and *I. texanus*, but couplet 1 keys these species as not having spurs. Couplet 12 is confused by 12b referring to figure 10A, which does not agree with all of the characters of the couplet and is not of a species to which the key leads at that point. Couplet 15 is difficult, as the figures show the posterior process of palpal segment I directed in a similar way for both species, and the other differences noted are not distinctive; differences in form of the auriculae would seem to be an easier contrast to use. Couplet 10 is discordant with some subsequent couplets in that the statement for 10a, "Palpal segment I ventrally without an anterior or posterior process", leads to couplets 22 and 30 which refer to the presence or absence of a "small plate" or a "distinct plate" ventrally on palpal segment I, and to couplet 32 which refers to the presence of either a short or an elongate "posterior horn" ventrally on palpal segment I. The choice between the lateral carinae as "present but not pronounced" versus "faint to absent" in couplet 18 is difficult, particularly in the absence of other character states being given; the same difficulty is encountered in couplet 24. For couplet 30 the figures do not clearly support three of the four attributes given to distinguish *I. spinipalpus* from *I. pacificus*. Couplet 26 relies solely on the form of the apex of the hypostome, and this presents a problem when dealing commonly with specimens having damaged hypostomes. The key is also inconsistent in noting the distribution or hosts where these are restricted; in couplet 19, for example, the limited host range of *I. soricis* and the limited distribution of *I. eastoni* could be noted. In view of these and other shortcomings of the key, inclusion of a brief diagnosis for the nymph of each species would have been useful.

Despite its title, the book is clearly not a taxonomic treatment. Apart from the key, species are presented alphabetically; no consideration is given to phylogenetic relationships or relationships between species other than including the subgenus in the name of each species. The illustrations and other up-to-date information, along with the handy size of this guide (6 x 9 inches, or about 15 x 23 cm), are useful for naturalists, ecologists, public health and veterinary practitioners, as well as for researchers and students of tick biology. The moderate price of this book, though not a bargain for its size and content, should not deter its purchase by the many people who will find it useful.

Evert E. Lindquist,  
Ottawa, Ontario



**A. Maitland Emmet, Editor. *The Moths and Butterflies of Great Britain and Ireland. Volume 3. Yponomeutidae - Elachistidae.* Harley Books, Colchester, Essex, England 452 pp. 75.00 (hardback) 37.50 (paperback). 1996**

The series on moths and butterflies of Great Britain and Ireland, beginning with Volume 1 in 1976, was conceived to provide a fully illustrated and current work of identification for that region. Volume 3 is the seventh of the projected 11 volumes to appear. The families, number of species, and contributing authors in this volume include: Yponomeutidae (77 spp.), Glyphipterigidae (Orthoteliinae) (1 sp.), and Roeslerstammiidae (2 spp.) (D.J.L. Agassiz); Epermenidae (8 spp., H. C. J. Godfray and P. H. Sterling); Schreckensteiniidae (1 sp., A. M. Emmet); Coleophoridae (108 spp., A. M. Emmet, J. R. Langmaid, K. P. Bland, M. F. V. Corley, and J. Razowski); and Elachistidae (46 spp., K.P. Bland). The beautiful illustrations of Richard Lewington include eight duotone plates of larval cases and nine color plates of imagines. Male and female genitalia are figured for more than half of the species.

As explained in the preface of this work, the series was divided at its inception into volumes based on a classification that since has changed greatly. The lack of general agreement about the status of groups included in Yponomeutidae is evident within this volume. Agassiz treats the Yponomeutidae in the broad sense, including Ypsolophinae, Plutellinae, and Argresthiinae as subfamilies. However, the revised classification of British Lepidoptera on the preceding page maintains family status for the three subfamilies.

The systematic section of this volume is preceded by an excellent review of invasions of Lepidoptera into the British Isles. Using case histories and extensive distributional data, the author, D.J.L. Agassiz, discusses characteristics of invading species, factors affecting rate of spread, and patterns of spread. Although this contribution does not concern the taxa treated in this volume, it is an excellent source of information for ecologists and lepidopterists everywhere.

The treatment of each family includes a checklist and keys to subfamilies, genera, and species, as needed for identification of the British fauna. Each family (and subfamily of Yponomeutidae) includes a review of nomenclature, diagnostic characters, and general information on immature stages and habits. Each of the 240 species has an abbreviated synonymy, description of imago, flight period, distribution, and maps showing records for Great Britain and Ireland. All but three rarely collected species have information on life histories, including larval hosts, brief descriptions of eggs, oviposition sites, larvae, and pupae, and other information.

The wealth of information on Coleophoridae deserves special mention. An extensive treatment of the larval case, including descriptions and keys to the eight types of cases, provides information not available in any other single work. The key to species based on larval host and type of case is something that workers in other regions of the world only can envy. Extensive life history and behavioral information is provided for each species, which for one species is highlighted by photographs and original drawings by a high school student, Jane Feehan. Drawings of male and female genitalia are provided for each species, although some are not of the best quality as lines and stipples fade into oblivion.

Descriptions of species of Elachistidae are of similar high quality to the other taxa. Figures of genitalia, which the author stated were "generalized diagrams," appear adequate for separation of British species, but their systematic value for other regions is minimal. Both male and female genitalia are drawn with various parts of the same species on different plates, and this may be an inconvenience for anyone examining a slide preparation of a given species.



I keyed identified specimens of five *Coleophora* species and three *Elachista* species from Norway and Sweden and compared the specimens with the color figures of British specimens. The *Elachista* specimens keyed easily. The *Coleophora* were more difficult because of the subtleties in pattern and color. Practice will be needed to differentiate the shades of ochreous and fuscous as well as to become familiar with the author's terminology, e.g., "hairs" in cpt. 43 are narrow scales. I found the drawings to be relatively accurate. Scandinavian specimens of some *Coleophora*, e.g., *C. hemerobiella* and *C. vestianella*, are darker with more suffusion of gray or buff than shown in the figures of British specimens, but these slight differences might be populational variations.

The editing is excellent, and few misspellings were noted. J.-F. Landry, a junior author in the coleophorid references, is misspelled as "Landrey," and *Tichotripis*, not *Trichotrips*, is a synonym of *Epermenia*. References are provided at the end of each family, creating some redundancy with some authors being cited 3 and 4 times in the volume.

This volume is essential to all who are interested in Lepidoptera of Great Britain and Ireland, and it will be valuable to other lepidopterists in western Europe because of the shared fauna. Although only 16 of the 240 British species occur in North America, this volume will be a useful reference for microlepidopterists here and other continents.

The editor, A. Maitland Emmet, contributing authors, and others involved in the production of this volume are to be congratulated for maintaining the high standards envisioned by John Heath, the original editor, Edward Charles Pelham-Clinton, to whom this volume is dedicated, and others who have worked to see this series become a success.

Richard L. Brown  
Mississippi

**Heinrich, Bernd. 1996. "*The Thermal Warriors - Strategies of Insect Survival*", Harvard University Press, 221 pp. Cost \$27 U.S. funds, hardcover**

When I first opened this book and leafed through it, I was delighted by Heinrich's pencil and ink drawings. Each one illustrates an example from the text in such an artistic, personal way that I could feel his affection for the insects he observes and the passion with which he studies their lives. In the preface, Heinrich writes, "I count among my greatest joys the satisfaction of discovering, or seeing others discover, the ingenuity for survival that insects have evolved in the irreducible crucible of temperature. This is entertainment of the highest sort."

The joy of discovering bursts from most pages of this book. Heinrich begins by taking readers through the evolution of flying insects: "From Cold Crawlers to Hot Flyers" is Chapter One. He then describes insects' need to maintain balance between the amount of heat they produce or absorb and the large amount of heat their bodies lose to the environment. Chapter Three is devoted to discussion of "the flight motor", beginning: "The fly is a marvelous miniature flying machine with a built-in pilot. It has two wings that row the air, a motor that powers the wings, a fuel tank, and a system of tubes and pumps to deliver the fuel." Subsequent chapters deal with the many varied mechanisms by which insects warm up and cool down. All large, active flyers such as dragonflies, moths, butterflies, cicadas, katydids, flies, wasps and bees must warm up before flying, and they do this by shivering: rapidly contracting the thoracic muscles and disengaging the wings. Shivering, or close physiological variations, may also produce whining or buzzing warning signals, sound for social communication, or may be used to dislodge pollen

from flowers. Basking, a passive way of warming up, is used by many butterflies and sit-and-wait strategists such as syrphid males waiting for mates, or predatory robber flies waiting for a meal. The chapter on cooling off discusses conductive and convective cooling by flying carpenter bees, which use their heads and abdomens as radiators to draw heat from their furry thoraxes; tiger beetles escaping from hot sand by "stilting" and flying; tenebrionids running at one metre per second to lose heat by convection in desert environments; and other mechanisms including evaporative cooling by honeybees, sawfly larvae and cicadas (which "sweat"! ). Each description in these chapters is illustrated with a pencil sketch that brings the example to life.

The book then goes on to discuss the form and function of insect bodies: wing length and longevity; insulating forms such as air sacs, wing scales and setae; color and heat absorption; leg length and stilting for heat avoidance; and counter-currents and alternate currents for heat retention in hymenopterans. The final chapters describe how these form-and-function thermoregulatory relationships are used in life strategies of various insects, and discusses why insects thermoregulate.

This wonderful book has received many other glowing reviews. It will appeal to anyone interested in insects and their physiological adaptations. It would certainly spark an interest in young readers, even if they didn't grasp all the details. Those interested in a more in-depth treatment of insect thermoregulation could go on to read Heinrich's earlier book, "The Hot-Blooded Insects", which is longer and more comprehensive.

Sheila Fitzpatrick  
Agassiz, B.C.

**Sawyer, Richard C. 1996. "To Make a Spotless Orange - Biological Control in California", Iowa State University Press, 290 pp. Cost \$42.95 U.S. funds, hardcover.**

What were the principal driving forces behind the development of classical biological control in North America? Why did the technique thrive in California while it withered away in the rest of the United States - and developed slowly in Canada? Did theory drive the practice of classical biological control, or was information flow in the opposite direction? What institutional and scientific framework is necessary for the implementation of classical biological control? These and other interesting questions are addressed by science historian, Richard C. Sawyer.

"To Make a Spotless Orange" is an historical analysis of classical biological control in California - but it is much more than that. The work in California significantly influenced the studies of population dynamics, systematics, evolution, applied entomology, as well as environmental issues. Biological control efforts were weaved in an agricultural, academic and institutional matrix that spanned the globe. Richard Sawyer's book gives us snapshots of the matrix and the nature of the complex interactions, in space and time. The book begins in the 1800's and brings us through to the 1990's. The life, efforts, and accomplishments of Harry S. Smith are extensively documented, but the matrix encompasses the work of Linnaeus, Darwin, Walsh, Fitch, Riley, Howard, Fiske, Koebele, Cooper, Webber, Powell, Thompson, Uvarov, Bodenheimer, Nicholson, Bailey, Andrewartha, Birch, Varley, Boyce, DeBach, Dobzhansky, Baetson, Carson, Clausen, Pickett, Huffaker, Clements, Shelford, Doutt, Chant, Turnbull, van den Bosch and many others. Richard Sawyer looks at the achievements and contributions of these people in the context of classical biological control; and for some, he delves into their personalities, their weaknesses and their mistakes. Human nature, politics, institutions, profit, scientific theory, and fascinating stories of successes and failures in biological control are all part this exceedingly readable book.

All too often, people become immersed in their activities and fail to look back at the roots of those



activities. "To Make a Spotless Orange" allows us not only to look back, but also to judge what influences were important in shaping events and directions. It is more than just an account of interesting history. Richard Sawyer offers an interpretation, and points to lost, and new opportunities for classical biological control. As such, this book may very well influence the future of biological control.

The book has an extensive set of notes documenting the sources of information for each of the seven chapters, and these notes are referenced by numbers within the text. There is also a bibliography and a useful index. "To Make a Spotless Orange" will be of interest to students of biology (and history), but especially practitioners of pest management, and students and scientists involved in all aspects of entomology. It is essential reading for those involved in the debate over the environmental impacts of classical biological control; and it may provide useful insights to directors of agri-business and the biological sciences.

David A. Raworth  
Agassiz, B.C.

### **New Titles**

*Diseases and Pests of Vegetable Crops in Canada*  
**edited by R.J. Howard, J.A. Garland, and W.L. Seaman**

This book of 554 pages is a comprehensive and practical guide that includes information on symptoms/damage, disease/insect life cycles, and management of important diseases, insect, mite, nematode, mollusc, and weed pests of vegetable crops. The 1030 high quality color photographs that accompany the detailed text provide examples of pests, symptoms, and damage. Researchers, extension agents, educators, and producers have found this book to be an indispensable tool. **The price of the book is \$80.00 (Can.) for residents of Canada and \$61.00 (U.S.) for residents of the United States and includes shipping and taxes.** The publication can be obtained by sending a cheque or money order to: Entomological Society of Canada, 393 Winston Ave., Ottawa, Ontario, K2A 1Y8. Cheques or money orders should be made payable to the Entomological Society of Canada. Payment can also be made by Visa or Mastercard. Prices include shipping, handling and taxes. Publication inquiries can be made by phone (613-725-2619), fax (613-725-9349), or e-mail: [entsoc.can@sympatico.ca](mailto:entsoc.can@sympatico.ca).

*Crop Protection Compendium CD-ROM*  
**CAB International**

This is the first stage towards a global compendium of the pests and diseases of economically important crops. This first module includes information on over 1000 major pests, natural enemies and crops, focusing on S.E. Asia and the South Pacific. It provides diagnosis and taxonomic keys and it will be updated annually. It uses Windows-based software for a PC. Contact: The Publishing Division, CAB International, Wallingford, Oxon, OX10 8DE, UK

*Nomina Insecta Nearctica CD-ROM*  
**Compiled by R.W. Poole and others**

A checklist of insects of North America in four volumes. Total price for four volumes and CD-ROM: US\$389.75. E-mail: [eis@ix.netcom.com](mailto:eis@ix.netcom.com)



*Volume 30 (1), March - mars, 1998*  
**Microbial Control of Grasshoppers and Locusts**  
**edited by M.S. Goettel & D.L. Johnson**  
**Memoirs of the Entomological Society of Canada, Volume 171**

This new publication summarizes the current state of knowledge on microbial control of locusts and grasshoppers, presents important research information, and identifies areas for future research. It is an essential reference for students, researchers, educators, and extension workers and consists of 24 chapters comprising some 400 pages written by 51 authors from 11 countries. Seventeen chapters are reviews and eight report research findings.

**Contents:**

1. Prior, C. & D.A. Streett. Control strategies.
2. Shah, P.A., C. Kooyman & A. Paraoso. Surveys for fungal pathogens in Africa and the Near East.
3. Jenkins, N.E. & M.S. Goettel. Methods for mass-production.
4. Moore, D. & R.W. Caudwell. Formulation.
5. Bateman, R. Methods of application.
6. Goettel, M.S., & S.T. Jaronski. Safety and registration.
7. Swanson, D. Economic feasibility in Madagascar.
8. Streett, D.A., S.A. Woods & M. A. Erlandson. Entomopoxviruses.
9. Erlandson, M.A. & D.A. Streett. Entomopoxviruses: Biochemical characterization.
10. Zelazny, B., M.S. Goettel & B. Keller. Bacteria.
11. Baker, G.L. & J.L. Capinera. Nematodes and Nematomorphs.
12. Bidochka, M.J., R.J. St. Leger & D.W. Roberts. Deuteromycete fungal infections.
13. Jaronski, S.T. & M.S. Goettel. *Beauveria bassiana*.
14. Delgado, F.X., et al. Laboratory and field evaluations of *Beauveria bassiana* in Africa.
15. Inglis, G.D., et al. Persistence of *Beauveria bassiana*.
16. Lomer, C.J., C. Prior & C. Kooyman. *Metarhizium*.
17. Milner, R.J. *Metarhizium flavoviride* in Australia.
18. Lomer, C., et al. Control in northern Benin using *Metarhizium flavoviride*.
19. Magalhaes, B.P., et al. Characterization of a Brazilian isolate of *M. flavoviride*.
20. Delgado, F.X., et al. Field and laboratory evaluations in Madagascar.
21. Carruthers, R.I., et al. *Entomophaga grylli*.
22. Sawyer, A.J. et al. Patterns of cadaver persistence and sporulation by *E. grylli*.
23. Johnson, D.L. Nosematidae and other Protozoa.
24. Johnson, D.L. & M.G. Dolinski. Attempts to increase the prevalence and severity of infection by repeated application of *Nosema locustae*.

The publication can be obtained by sending a cheque or money order for \$45 Can. (for residents of Canada) or \$45 U.S. (for residents of U.S. and elsewhere) to: Entomological Society of Canada, 393 Winston Ave., Ottawa, Ontario, K2A 1Y8. Cheques or money orders should be made payable to the Entomological Society of Canada. Payment can also be made by Visa or Mastercard. Prices include shipping, handling and taxes. Publication inquiries can be made by phone (613-725-2619), fax (613-725-9349), or e-mail ([entsoc.can@sympatico.ca](mailto:entsoc.can@sympatico.ca)).

**To All Lepidoptera Enthusiasts**

We are happy to announce the publication of Fabriques' Supplement no. 7, "Liste des Lépidoptères du Québec et du Labrador" (List of the Lepidoptera of Québec and Labrador).

Authored by Louis Handfield, with the collaboration of Jean-François Landry, Bernard Landry and J. Donald Lafontaine, this checklist records 2576 species representing 954 genera, 64 families and 29 superfamilies; an additional 278 species found in adjacent territories and whose occurrence in Québec is possible are also mentioned. All species recorded have been validated by examination of specimens in collections. This is the first comprehensive list of Lepidoptera of Québec since 1912. No new nomenclatural changes are proposed. However, the nomenclature has been thoroughly updated; many names, reflecting either recently introduced species or recent nomenclatural changes published in Europe, appear for the first time in North American literature. The list is accompanied by synoptic tables, 259 nomenclatural and faunistic notes, an annotated list of 52 species erroneously recorded from Québec, references to taxonomic works useful for species identification, comments on the adopted classification of higher taxa, an exhaustive list of references consulted, and a complete index of all taxonomic names. The text is in French, but there is an English abstract.

Fabriques's Supplement 7 is available from the "Association des entomologistes amateurs du Québec" (address below) at CDN\$15.00 for Canadian members of AEAQ, the "Société d'entomologie du Québec", and the Entomological Society of Canada. The cost for non-members of these three organizations will be CDN\$ 18.00. Additional mail and handling fees are CDN\$ 3.50 for Canadian residents, CDN\$ 5.50 for residents of the U.S.A. and CDN\$ 6.00 (surface mail) or CDN\$ 12.50 (air mail) for residents of other countries. Only cheques and money-orders in Canadian dollars will be accepted. Payment should be made to the order of A.E.A.Q.

**Contact:** Association des entomologistes amateurs du Québec, a/s Insectarium de Montréal, 4581, rue Sherbrooke Est, Montréal, Québec H1X 2B2, CANADA. E-mail: [info@aeaq.qc.ca](mailto:info@aeaq.qc.ca)  
Phone: (514) 652-6087, Web site: [WWW.AEAQ.QC.CA](http://WWW.AEAQ.QC.CA)

**A New Journal - "*The Lepidoptera Journal*"**

The new lepidoptera journal is now available. Individual subscription is available at only 20.00 dollars U.S. in USA, 28.00 dollars Can. in Canada and the other country at only 25.00 dollars U.S. The Payment may be made by cheque (only Canada and USA), money order or cash.

*Subscribers benefits*

- Four issues of "*The Lepidoptera Journal*" per year.
- A directory of subscribers.
- Free ad placement in *The Lepidoptera Journal*
- No page charges for articles submitted (any articles submitted by non-subscriber are welcome)
- Questions personally answered, information or advice, we will do our best to try to help you.
- Be "connected" (exchange, buy, sell etc.) with other subscribers who share your interest in lepidoptera .

*History*

Created in 1997 *The Lepidoptera Journal* is published quarterly. Designed for both the amateur and professional lepidopterist, the journal is an excellent source of news and information emphasizing the families Saturniidae and Sphingidae. *The Lepidoptera Journal* is separated into five sections:

1. Information (news, editor's note etc).
2. Book (new books and books review).

3. Useful hints (articles to guide you).
4. Observation (articles on habitat, species, biology, conservation etc).
5. Lepidoptera market place (where members can buy sell or exchange: livestock, specimens, equipment, books etc).

Color photography enhances articles while Marketplace assists in obtaining specimens as well as live material. Become a subscriber to *The Lepidoptera Journal* and connect yourself with those who share your interest in the fascinating world of Lepidoptera.

Contact: Patrick Marceau, 1470 St-Olivier, Ancienne-Lorette, Quebec, G2E 2N9, Canada  
E-mail: [pmarceau@cmq.qc.ca](mailto:pmarceau@cmq.qc.ca)

### Amber with inclusion website

I have recently posted a website dedicated to amber and its inclusions entitled The Dead Bug in Amber Club (<http://members.tripod.com/~Snakefly/>). I invited you and your colleagues to visit my website. Please pass the word about my site to anybody interested in entomology. I'd appreciate any feedback. If there is anything I can do, let me know. Remember, before there were ants in your pants or a bug in the rug, there were insects in amber.

Thank you, Yale Goldman  
[Snakefly@hotmail.com](mailto:Snakefly@hotmail.com)

## SCHOLARSHIPS AND GRANTS

### Entomological Society of Canada Postgraduate Awards 1998

The Entomological Society of Canada will offer two postgraduate awards of \$2,000 each to assist students beginning graduate study and research leading to an advanced degree in entomology. The postgraduate awards will be made on the basis of high scholastic achievement.

### Invitation for applications

**Eligibility:** Applicants for the post graduate awards must be members of the Entomological Society of Canada. The successful applicants must be either Canadian citizens or landed immigrants with Bachelor's degrees from Canada universities. Applicants must begin their first year of postgraduate studies between 15 June 1996 and 31 December 1998. The studies and research must be carried out at a Canadian university. Each award is conditional upon certification by the Department Head that successful applicants have been accepted into the first year of a program of study and research for an advanced degree with full graduate status. A student who was unable to gain admission or enters graduate school as a qualifying candidate is not eligible to receive an award.

**Method of Application:** Applicants must submit a properly completed form, with support documents. Applications must be received by the Secretary of the Society no later than 12 June 1998.

**Process of Selection and Award Presentation:** Applications will be reviewed by a committee of the Society. An announcement of the two winners will be made at the annual meeting of the Society and each winner will receive a certificate. Payment of the award will be made in October 1998.



## Regulations

*Earnings from Other Sources* - Award holders are permitted, under normal circumstances, to demonstrate, instruct or assist in non-degree related research for a maximum of 200 hours per annum, provided that the Head of their Department considers this is desirable and that it does not hinder the progress of their studies. Apart from these assistantships, award holders will devote their full time to study and research and will not undertake any paid work during the school term. They may hold other awards and scholarships.

*Transfers* - Awards are made on the condition that the winners engage in a program of graduate studies and research for an advanced degree in entomology in Canada. Students, who after receiving the award, wish to change their graduate program or transfer to a foreign university may be asked to decline the award. Any change in the course of study, department or university in which an award winner is registered requires prior approval of the Scholarship Committee. A request for permissions to transfer must be supported by statements from Heads of Departments.

*Additional Allowances* - The award stipends are all-inclusive. There is no provision for additional grants by the Society for any purpose. Additional grants, for example, to attend meetings, pay course fees, meet publications costs, etc., will not, under any circumstances, be authorized.

All communications regarding these awards, including requests for applications, should be addressed to:

Dr. Rick West, ESC Secretary  
Box 515, Portugal Cove  
Newfoundland A0A 3K0  
phone and fax: 709-895-2734  
email: [reely.west@roadrunner.nf.net](mailto:reely.west@roadrunner.nf.net)

### La Société d'Entomologie du Canada Bourse pour Étudiants Post-Gradués 1998

La Société d'entomologie du Canada offrira deux bourses d'un montant de \$2,000 chacun pour aider des étudiants qui entreprennent des études post-graduées et des recherches en vue de l'obtention d'un diplôme d'études supérieures en entomologie. Les bourses seront accordées aux étudiants ou étudiantes en raison des seuls critères de réussite académique.

#### Avis

*Éligibilité:* Candidats pour les bourses doivent être membres de la Société d'entomologie de Canada. Les candidats doivent être Canadiens ou résidents reconnus du Canada et détenir un baccalauréat d'une université canadienne. Les candidats doivent obligatoirement avoir débuté leur première année d'études post-graduées entre le 15 juin 1996 et le 31 décembre 1998, et effectuer leur étude et recherche dans une université canadienne. Les bourses ne seront accordées que lorsque les directeurs de Département auront certifié que les candidats choisis sont inscrits en première année d'un programme d'études supérieures, et ce avec tous les privilèges attachés au statut d'étudiant gradué. Un étudiant qui n'a pu être admis à l'École des Gradués, ou qui s'inscrit en vue de compléter l'obtention de crédits, n'est pas éligible à la bourse.

*Procédure:* Les candidats devront soumettre leur candidature à l'aide du formulaire approprié et y joindre tous les documents requis. Les demandes devront être reçues par le Secrétaire de la Société au plus tard le 12 Juin 1998.

*Sélection et remise des bourses:* L'analyse des candidatures se fait par un comité de la Société, et l'annonce des récipiendaires se fera à la réunion annuelle de la Société où ils recevront un certificat. Le paiement de la bourse aura lieu en octobre 1998.

## Règlement

*Autres sources de revenus* - Un boursier pourra normalement donner des séances de cours ou de démonstration et être auxiliaire de recherche jusqu'à un maximum de 200 heures par année, en autant que le Directeur de son département considère cela profitable et que ces tâches additionnelles ne nuisent pas au progrès de l'étudiant. Sauf pour ces assistances, un boursier devra consacrer tout son temps à ses études et recherches et n'accepter aucune autre rémunération. Il peut cependant jouir d'une autre bourse ou d'un prix.

*Transferts* - Les bourses sont accordées à condition que les boursiers entreprennent des études graduées en vue de l'obtention d'un diplôme en entomologie au Canada. Les boursiers qui décideront de changer de champ d'études, ou de transférer dans une université hors du Canada peuvent se voir retirer leur bourse. Après acceptation de la bourse, tout changement de programme d'études, de département ou d'université devra recevoir au préalable l'approbation du Comité de la Bourse de la SEC. Une telle demande doit être accompagnée de documents provenant des Directeurs des départements concernés.

*Frais supplémentaires* - La somme offerte est invariable. En aucun cas la Société n'accordera de montant supplémentaire. Des frais additionnelles, par exemple, pour assister aux réunions scientifiques, payer des frais de cours, défrayer des coûts de publications, etc., ne seront autorisés sous aucune considération. Toute correspondance relative aux bourses, incluant les demandes de formulaires doit être adressée à:

Dr. Rick West, Secrétaire SEC  
Box 515, Portugal Cove  
Newfoundland A0A 3K0  
phone and fax: 709-895-2734  
email: [reely.west@roadrunner.nf.net](mailto:reely.west@roadrunner.nf.net)

## MEETINGS

**VIIth International Colloquium on  
Invertebrate Pathology and Microbial Control  
and  
IVth International Conference on *Bacillus thuringiensis***

Therme International Hotel, Sapporo, Hokkaido, Japan, August 23-28, 1998

*Contact:* Toshihiko Iizuka. Chair, Local Organizing Committee, Faculty of Agriculture, Hokkaido University, Sapporo 060, Japan. Tel. & Fax: 81-11-706-2423; E-mail: [tiizuka@abs.agr.hokudai.ac.jp](mailto:tiizuka@abs.agr.hokudai.ac.jp)  
*or visit:* <http://shin.agr.hokudai.ac.jp> or <http://sip.home.ml.org>

*or contact:* Mark S. Goettel Tel: 403-317-2264; Fax: 403-382-3156; e-mail: [goettel@em.agr.ca](mailto:goettel@em.agr.ca)

### **Gall Biologists Meet in Matrafured, Hungary**

54 biologists interested in gall insects met August 14-19 at a resort northeast of Budapest to present papers. Two Canadians there were Dan Quiring and Joe Shorthouse, and both presented papers. The next international gall symposium will be held in South Africa in 2001.

## MISCELLANEOUS

### **Newfoundland's at it again.**

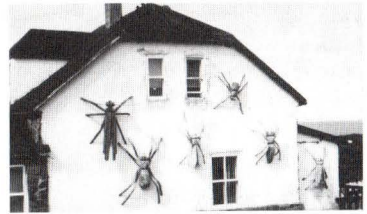
Damp, but happy participants in the fifth annual *Newfoundland Entomology Collecting Weekend*, held at Salmonier Nature Park near St. John's in June 1997.

Peggy Dixon  
St. John's



### **Those pesky things are everywhere!**

It seems insects get into everything, from river bottoms to mountain tops, from dead bodies to amber. Now they are showing up as large scale objets d'art in back lawns and on houses. The insects and spiders are on the side of a house in L'Anse-au-Griffon, a small town on the Gaspé Peninsula. The sculptures are the work of M. Réjean Pipon and they are carved in white cedar and white pine with the help of a chainsaw.



The honey bee is in the town of Falher in the Peace River Block of N. Alberta. Falher is known as the 'Honey Capital of Canada'. There are over 20000 hives in the area and in peak years about 2270 kg of honey is produced. The bee was designed and constructed by a local welder in 1990. It cost \$25000 to build and is 6.9 m long and 2.3 m wide. It commemorates the importance of honey to the local economy.



Contributed by Joe Shorthouse.

## NET, SHOVEL AND AXE

### **My Heavens that Kitty's Big**

Al Oaming was owner of the game farm near Edmonton a number of years ago. He owned a pet cheetah and would take it along on speaking engagements right into the lecture hall to impress the public and show it off. One day he was returning in his pickup truck from a talk he had given in Saskatchewan. Usually the cheetah travelled in the back of his truck, but occasionally Al would let it out to run alongside the truck for exercise and the joy of running. On this trip he had let it out and it was running alongside in the ditch out of sight from the roadway. While it was running, a chopper-rigged motorcycle roared up and passed the truck in a great rush. This was too much for the cheetah, which jumped out of the ditch and quickly caught up and ran alongside the motorcycle. The cyclist gave the cat a horrified look and sped up. The cheetah sped up too and kept pace. The cyclist, by now sweating, sped up again. The cheetah sped



up again and was enjoying the run. After a few more hundred yards the big cat got tired and dropped back, jumping back into the truck as it came along. About half an hour later the Al stopped at a gas station to fill up. The attendant was filling the truck when he told Al that a crazy guy on a motorcycle had stopped by and claimed that he had been chased by a tiger for several miles and that he had narrowly escaped being caught and eaten. Al looked dutifully surprised and murmured that the world was full of crazy people these days.

Contributed by Les Safranyik

### **There's an answer to everything!**

At the beginning of the term (5 Jan 98) this year, I gave a "First-day Quickie" exam. I asked 10 questions. The four that elicited the most far-out and fascinating answers are below. I have changed nothing - punctuation, gramamr, spelling.

**Q.:** *Where would you look for a blow fly? Why is it called a blow fly?*

- A.:**
- In the wind. It enlarges itself for protection.
  - Near water bodies - because it filter feeds in the water and blow the extra water back out.
  - Under a rock. It makes blowing sounds.
  - In riparian areas; it blows itself up by intaking air and floats/flyes.
  - Southern Alberta - the winds in southern Alberta blow it along.
  - With a cattle herd - it is called this because it lays larvae in the nose of cattle.
  - In the air. It is called a blow fly because it rides on the wind.
  - The desert. It is always hot and it keeps cool by blowing itself.
  - In the air - called a blow fly because it floats on a breeze.

**Q.:** *What is a snow flea or springtail?*

- A.:**
- Insect that has a long tail, which is under its body. This is used for transportation from one host to another.
  - An insect that looks like a kind of flea or a bedbug but has a curved posterior that it springs on for locomotion.
  - Falls out of the sky during winter.
  - Little bugs that live in snow during the winter and come out in the spring.
  - Tiny aerial insects that get stuck in the snow as it falls.

**Q.:** *Give a reasonable estimate of the number of insect species that live in Alberta.*

- A:** (i) 5 million (ii) 6 million (iii) 10 million (iv) 909 (v) 500 (vi) 250 000 (only the way-out answers given here)

**Q.:** *Where are many long-horned beetles found in Alberta?*

- A.:** Forested areas. These beetles use the horns to chew through wood.

I hope to have many of the above-listed misconcepts corrected by the end of the course in April 1998.

Robin Leech teaches as the Northern Alberta  
Institute of Technology, a post-secondary institution.

### **Back issues of *The Canadian Entomologist***

**For sale:** A complete set of back issues of *The Canadian Entomologist* from 1962-1989. Asking price: \$1680 US (\$60 per volume). Contact: Tim McCabe at: [timmccabe@aol.com](mailto:timmccabe@aol.com)

ENTOMOLOGICAL SOCIETY OF CANADA  
LA SOCIÉTÉ D'ENTOMOLOGIE DU CANADA

393 Winston Ave., Ottawa, Ontario K2A 1Y8

Application for membership - (new members only)  
Demande d'adhésion (nouveaux membres seulement)

Name and Address (please print):  
Nom et Adresse (lettres moulées):

telephone (bus.) / téléphone (au travail):

Fax:

Electronic mail address / Adresse électronique:

Keywords describing interest (up to six):  
Décrivez vos intérêts en utilisant jusqu'à  
six mots clés.

Membership is a personal affiliation; publications are the personal property of the individual member.

Cotisation est une affiliation personnelle; publications payées ici appartiennent à l'individu

**MEMBERSHIP DUES / COTISATION**

Regular member / Cotisation régulier with/avec...Cdn \$80.00 + \$5.60 GST (Can) ....\$.....  
The Canadian Entomologist & Bulletin US\$74 (\$100 Cdn) (U.S.A. & Int'l)

or/ou with Memoirs/avec Mémoires, The Canadian .....Cdn 100.00 + \$7.00 GST (Can) ....\$.....  
Entomologist & Bulletin US\$90 (\$120 Cdn) (U.S.A. & Int'l)

Student member / Cotisation étudiant with/avec...Cdn \$20.00 + \$1.40 GST (Can) ....\$.....  
The Bulletin US\$18 (\$25 Cdn) (U.S.A. & Int'l)

or with/ou avec The Canadian Entomologist & Bulletin...Cdn \$40.00 + \$2.80 GST (Can) ....\$.....  
US\$36 (\$45 Cdn) (U.S.A. & Int'l)  
(ask your professor to endorse this form/demande l'appui de votre professeur)

Endorsement/Signature du professeur .....

Enclose cheque or money order (or use Mastercard or VISA) payable to : Entomological Society of Canada

Inclure un chèque ou mandat (ou utilisez Mastercard ou VISA) payable à: Société d'Entomologie du Canada

If you need an official receipt, please check: .....

Si vous désirez un reçu officiel, indiquez, s'il vous plaît: .....

Please copy and distribute to interested non-members. Thankyou.

# ENTOMOLOGICAL SOCIETY OF CANADA - 1997 LA SOCIÉTÉ D'ENTOMOLOGIE DU CANADA - 1997

## Executive Council - Conseil Exécutif

### *President/Président*

H. Danks  
Biological Survey of Canada  
Terrestrial Arthropods,  
Can. Museum of Nature/Zool. Div.,  
Box 3443, Station D  
Ottawa, Ontario K1P 6P4  
Tel. 613-566-4787  
Fax. 613-364-4021  
Email:hdanks@mus-nature.ca

### *Second Vice-President/Second Vice-Président*

Dan Johnson  
RR # 8 - 40 - 9  
Lethbridge  
Alberta T1J 4P4  
Tel: (403) 327-4561  
Fax: (403)382-3156  
E-mail: johnsondl@em.agr.ca

## Trustees - Fiduciaires

### *Treasurer/Trésorier:*

Gary Gibson,  
Entomological Society of Canada,  
393 Winston Ave.,  
Ottawa, Ontario K2A 1Y8  
Tel. 613-759-1823  
Fax. 613-759-1927  
Email: gibsong@em.agr.ca

### *Scientific Editors/Editeur Scientifique*

#### *The Canadian Entomologist:*

Jean Turgeon  
Great Lakes Forestry Centre  
P.O. Box 490, Sault Ste-Marie  
Ontario P6A 5M7  
Tel: (705) 949-9461

#### *Bulletin Editor:*

H. Barclay,  
Pacific Forestry Centre,  
506 West Burnside Road,  
Victoria, B.C. V8Z 1M5  
Tel. 250-363-0736  
Fax. 250-363-0775  
Email:hbarclay@pfc.forestry.ca

## Directors - Administrateurs

*Directors-at-Large:* R. West (1998), S. Fitzpatrick (1998), L. Dosdall (1999), J. Spence (1999),  
M. Goettel (2000), V. Nealis (2000)

*Regional Directors/Directeurs régionaux:* T. Shore (ESBC), D. Langor (ESA), O. Olfert (ESS),  
R. Lamb (ESM), B. Lyons (ESO), C. Cloutier (SEQ), R.F. Smith (AES)

### *First Vice-President/Premier Vice-Président*

Linda Gilkeson  
Pesticide Management Section  
B.C. Environment  
777 Broughton St.  
Victoria, B.C.  
V8V 1X4  
Tel. 250-387-9410  
Fax 250-387-8897  
E-mail lgilkeson@epdiv1.env.gov.bc.ca

### *Past-President/Président sortant*

S.A. Marshall,  
Dept. Environmental Biology,  
University of Guelph,  
Guelph  
Ontario N1G 2W1  
Tel. 519-824-4120, extn. 2720  
Fax. 519-837-0442  
Email:smarshall@evbhort.uoguelph.ca

### *Secretary/Secrétaire*

Dr. Rick West  
Box 515,  
Portugal Cove  
Newfoundland  
A0A 3K0  
phone and fax: 709-895-2734  
email: reely.west@roadrunner.nf.net

### *Memoirs:*

V. Behan-Pelletier,  
CLBRR, Agriculture and  
Agri-Food Canada,  
Ottawa, Ontario K1A 0C6  
Tel. 613-759-1000  
Fax. 613-759-1927  
Email:behanv@em.agr.ca

### *Entomological Society of Canada:*

Head Office  
393 Winston Avenue  
Ottawa, Ontario  
K2A 1Y8  
Tel. 613-725-2619  
Fax. 613-725-9349  
bg822@freenet.carleton.ca



## OFFICERS OF AFFILIATED SOCIETIES - 1998

### ENTOMOLOGICAL SOCIETY OF B. C.

President Staffan Lindgren  
(lindgren@unbc.ca)  
President-Elect Murray Isman  
Past President Dave Gillespie  
Sec.-Treasurer Robb Bennett  
BC Ministry of Forests  
Silviculture Practices Branch  
7380 Puckle Road  
Saanichton, BC  
V8M 1W4  
Editor (Journal) Dave Raworth  
Editor (Boreus) Troy Danyk  
Reg. Dir. to ESC Terry Shore

### ENTOMOLOGICAL SOCIETY OF ALBERTA

President Mark Goettel  
Vice President Ken Fry  
Past President K. Floate  
Secretary Alec McClay  
Alberta Environmental Center  
P.O. Bag 4000  
Vegreville, AB T9C 1T4  
alec@aec.arc.ab.ca  
Treasurer Greg Pohl  
Editor (Proceedings) M. Williamson  
Reg. Director to ESC D. Langor

### ENTOMOLOGICAL SOCIETY OF SASKATCHEWAN

President Scott Hartley  
Vice President Lorraine Braun  
Secretary: Larry Grenkow  
Saskatoon Research Centre  
107 Science Place  
Saskatoon, Sask. S7N 0X2  
Telephone (306) 956-7293  
Fax (306) 242-1839  
Treasurer Julie Soroka  
Reg. Dir. to ESC Owen Olfert

### ENTOMOLOGICAL SOCIETY OF MANITOBA

President JoAnne Buth  
President-Elect Marjorie Smith  
Past-President Terry Galloway  
Secretary Ian Wise  
Agric & A.F. Canada  
Research Centre  
195 Dafoe Road  
Winnipeg, Man.  
R3T 2M9  
Treasurer Randy Gadawski  
Editor (Proceedings) D. Vanderwel  
Regional Director Bob Lamb  
Member at large Ginger Gill

### ENTOMOLOGICAL SOCIETY OF ONTARIO

President Robert Trottier  
President-Elect Scott MacDonald  
Past President Sandy Smith  
Secretary/ESC Rep. Barry Lyons  
c/o Canadian Forest Service  
P.O. Box 490  
Sault Ste. Marie, Ontario  
P6A 5M7  
blyons@forestry.ca  
Tel. 705-949-9461  
Fax. 705-759-5700  
Treasurer Blair Helson  
Editor Dolf Harmsen  
Librarian Dave Hull

### SOCIÉTÉ D'ENTOMOLOGIE DU QUÉBEC

Président D. Bouchard  
Vice-président A. Bouchard  
Secrétaire Christine Jean  
Département de Biologie  
Université Laval  
Sainte-Foy  
Québec G1J 7P4  
christine.jean@bio.ulaval.ca  
Trésorier M. Fréchette  
Président sortant F. Fournier  
Rédacteur (Antennae) C. Hébert  
Délégué à la S.E.C. J. Brodeur

### ACADIAN ENTOMOLOGICAL SOCIETY

President Lloyd Hollett  
Vice President Peggy Dixon  
Past President R. F. Smith  
Treasurer Gary Holloway  
Secretary Karen Ryan

Bulletin Editor: Hugh J. Barclay  
Published by: The Entomological  
Society of Canada / La Société  
d'entomologie du Canada

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.

Le **Bulletin de la Société d'Entomologie de 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.

Illustrated on the front cover is a *Rhinosimus viridiaeneus* Randall. *R. viridiaeneus* belongs to a group of beetles known as narrow-waisted bark beetles, which are transcontinental in distribution. The adults and larvae are predaceous, feeding on wood-boring beetle larvae within their galleries.

La page couverture illustre la adulte de *Rhinosimus viridiaeneus* Randall. *R. viridiaeneus* fait parti d'un groupe de coléoptères connu sous le nom de scolyte de l'écorce à faille étroite, qui ont une distribution transcontinentale. Les adultes et les larves sont des prédateurs qui se nourrissent de larves de coléoptères perce-bois à même leurs galleries.

List of contents/Table des matières	Volume 30, no. 1, Mar/mar 1998
<b>Society Business / Affaires de la Société</b> .....	1
Meeting Announcements.....	1
ESC/ESA Tentative Program .....	2
ESC/ESA Registration forms.....	4
ESC/ESA Abstract Forms.....	6
ESC/ESA Associates Activities.....	8
ESC/ESA Linnaean Games.....	10
Committees and Representatives for 1997/1998.....	12
Call for Nominations - Fellows.....	13
<b>ESC President's Report</b> .....	14
<b>News of Organizations</b> .....	17
BSC Terrestrial Arthropod Report.....	17
ICZN.....	21
<b>Personalia</b> .....	23
<b>Position Available</b> .....	23
<b>Publications</b> .....	24
<b>Scholarships and Grants</b> .....	31
ESC Postgraduate Awards.....	31
<b>Meetings</b> .....	33
<b>Miscellaneous</b> .....	34
<b>Net, Shovel and Axe</b> .....	34
<b>Membership form (new members only)</b> .....	36



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.

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.