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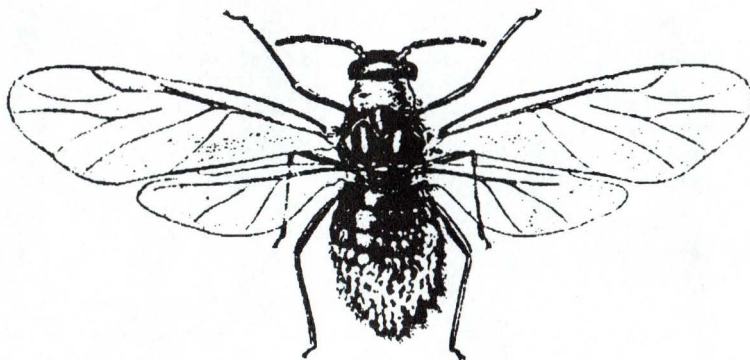
**VOL 25    December - décembre, 1993    No. 4**

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# **BULLETIN**



**ENTOMOLOGICAL SOCIETY OF CANADA  
LA SOCIÉTÉ D'ENTOMOLOGIE DU CANADA**

# ENTOMOLOGICAL SOCIETY OF CANADA LA SOCIÉTÉ D'ENTOMOLOGIE DU CANADA BULLETIN

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Contributions and correspondence regarding the *Bulletin* should be sent to the *Bulletin* Editor. Inquiries about subscriptions and back issues should be sent to the E.S.C. at: Faites parvenir vos contributions au *Bulletin* ou votre correspondance à l'Éditeur du *Bulletin*. Pour renseignement sur l'abonnement ou les numéros passés, prière de s'adresser à la S.E.C.:

Entomological Society of Canada  
393 Winston Ave.  
Ottawa, Ontario  
K2A 1Y8

## LETTER TO THE EDITOR

Dear Fiona,

I suspect that most members of the ESC are not aware that Ed Becker publishes a Retired Entomologists' Newsletter or if they are, retirement is far from their minds. Retirees are the people who set the stage for what present practitioners of entomology do, and they like to keep in touch.

In October an entomologist retired from this establishment, so I dropped a note to Ed so his name could be added to the list. Ed's reply was surprised and disturbed me. He wrote, "I must congratulate you for supplying this type of information — you are one of the few, if not the only one, that keeps me up to date with retirements. Usually I have to dig out the information myself, or else read about retirements in the *Bulletin*". I had been taking it for granted that people were keeping Ed informed. Now I am suggesting that they do. Ed is also interested in keeping track of retirees who may not have been entomologists, but were heavily involved in support roles.

I also look forward to biographical accounts of people as they retire. It is up to active Society members to ensure that nobody is missed.

Doug Eidt  
Forestry Canada, Fredericton, NB

P.S. Ed Becker can be reached c/o Biological Resources Division, CLBRR, Agriculture Canada, Ottawa, Ontario, K1A 0C6

## CORRECTION

On page 108 of the September *Bulletin* (Vol. 25) one of the new Directors-at-Large for 1994 was given as *Hugh* Thistlewood. Please note: this should have read *Howard* Thistlewood. I apologize for any confusion this may have caused.

Fiona F. Hunter, *Bulletin* Editor

Please send all correspondence  
concerning the *Bulletin* to:

Dr. Fiona F. Hunter  
*Bulletin* Editor  
Department of Biological Sciences  
Brock University  
St. Catharines, Ontario  
L2S 3A1

Tel. (905) 688-5550 Ext. 3394  
Fax. (905) 688-1855  
Email: hunterf@spartan.ac.BrockU.ca

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

Dr. Hugh V. Danks  
Biological Survey of Canada  
(Terrestrial Arthropods)  
Canadian Museum of Nature  
Box 3443, Stn D  
Ottawa, Ontario  
K1P 6P4

Tel. (613) 954-2648  
Fax. (613) 954-6439

The deadline for submissions to be included in the next issue (Vol. 26(1)) is **February 1, 1994**

La date limite pour recevoir vos contributions pour le prochain numéro (Vol. 26(1)) est le **1 février 1994**

## **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 in April 1994. Matters for consideration at this meeting should be sent to the Secretary at the following address:

Dr. Rick West  
Canadian Forest Service, Newfoundland and Labrador Region  
P.O. Box 6028, St. John's, Newfoundland A1C 5X8  
Fax (709) 772-2576  
email address: rwest@vax1.nefc.forestry.ca

### **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 1994** by the Secretary, Dr. Rick West (at the address given above).

Nominations pour Deuxième Vice Président et Directeur doivent être signée par trois membres de la Société et envoyée avant le **30 avril 1994** au secrétaire, Dr. Rick West.

### **Call for Nominations - Honorary Membership**

Nominations are invited for two Honorary Memberships in the Entomological Society of Canada. Honorary Members may be active members or former active members of the Society who have made outstanding contributions to the advancement of entomology.

Nominations must be signed by at least five active members of the Society and are then reviewed by the Membership Committee, who will select two names to be placed on the ballot. Nominations should include a brief biography of the candidate and a statement of her/his contributions to the advancement of entomology.

Nominations should be received by the Chair of the Membership Committee by **31 January 1994**. They should be sent in an envelope marked "Confidential" to the following address:

Dr. H.V. Danks, Biological Survey of Canada (Terrestrial Arthropods), P.O. Box 3443, Station D, Ottawa, Ontario K1P 6P4 (Fax. 613-954-6439)

### **Call for Nominations - Fellows**

Nominations are invited for Fellows in the Entomological Society of Canada. Fellows may be active or special members or entomologists who have made outstanding contributions to the advancement of entomology.

Nominations must be signed by four active members of the Society and are then reviewed by the Fellowship Selection Committee. Names are submitted to the Executive Council for approval. A brief biography of the candidate and a statement of her/his contribution to entomology should be included in the nomination. Nominations should be received by the Committee by **31 January 1994**. They should be sent in an envelope marked "Confidential" to:

J.A. Shemanchuk, Agriculture Canada, Research Station, P.O. Box 3000 Main, Lethbridge, Alberta. T1J 4B1



**President's Address  
presented at the Annual General Meeting  
Sault Ste. Marie, Ontario**

What kind of a year has it been? Along with the rest of the country, the Entomological Society of Canada has also had its ups and downs. Of greatest concern has been that of money. So what else is new?

Our Treasurer, **Bob Footitt**, has had to report that another year of deficit financing is in order. This may be partially offset by increased page charges but, nevertheless, money is, and will be, in short supply. Our only hope will be that memberships remain stable and that extraordinary expenses do not show up.

The deficit is in part due to our commitment to CFBS. Your vote this summer came through loud and clear that the ESC opt out of CFBS (the vote was 80:20). However, we are still obliged to pay our 1994 dues to CFBS and your Board has agreed to do so. That means an expenditure of some \$17,000 will be added to our budget and will be the cause of our deficit. Our Treasurer says we can weather that storm.

The book, "*Diseases and Pests of Vegetable Crops in Canada*" seems to have emerged from limbo. I have had reports of reviews, of changes, of proof copies, of translations, etc. but I was left wondering where the book was. The Board was informed of progress made and approved the printing of 4,000 English-language copies (to be printed by November 1993), and 1,500 French-language copies (to be printed by February 1994). We hope that the book sells well, thereby offsetting some of our costs and the impending deficit.

Other positive accomplishments of the Society include the completion of our own list of insect common names. **Elsbeth Belton** and **Doug Eidt** have compiled a list of names that will be available on disc, for a nominal charge, to members. Details, such as preferred format, price, duplication, and distribution still need to be worked out.

The Publications Committee, headed by **Lloyd Dosdall**, has suggested some striking and appropriate changes to the format and appearance of the Society's publications. It is the hope of the Committee that these changes can take on new life in the not too distant future.

The Biological Survey of Canada, under the able guidance of **Hugh Danks** and **George Ball**, have an ongoing active program that is examining biodiversity in our country. Collection, preservation, identification and curating of specimens is an on-going process but more of Canada's 1500 entomologists need to be involved.

Where do we go from here? Like any organization we have had our Good Times and our Not-So-Good Times. What we have accomplished is due in no small part to the good will and unfailing energy expended by our volunteer workers. These are the people who have steady, every-day jobs, are responsible to their employers, and yet take time for ESC activities. They are unpaid, in most instances,

except for the few who receive token honoraria; yet they work as hard or harder than those who are paid for doing a regular job.

I want to pay tribute to these helpful people, to publically acknowledge and thank them for the volunteer work they have done and are doing for the ESC. Criticisms occur quite frequently voicing dissatisfaction that nothing gets done or that projects, policies, and recommended changes occur too slowly. I must remind those who find fault that the workers are volunteers and cannot drop regular duties to attend to ESC matters. Here is where goodwill prevails and tolerance must be exercised to preserve harmony within our ranks so that progress can be made even if at a gallingly slow pace. Thus, I salute and acknowledge the assistance given to the Society by the hard working volunteer members.

A case in point is at hand. For the past eight years we have had the benefit of the exceptionally fine and dedicated services of our Editor, **Al Ewen**. He, as a volunteer worker, has given of his time and energy in a most worthy and dedicated fashion. I wish to acknowledge and thank him most sincerely for this service. Because of the increased editorial load that **Al** has had to carry he has reached the point where volunteerism is no longer adequate. He has informed the Board that additional remuneration will be required for him to remain in, and accept the responsibilities of the Editor's office.

Therefore, the Board has decided that it is now time to re-examine the "volunteer" status of the Editor position, as well as that of all other positions within the ESC that currently carry an "honorarium" component. Contrary to a subtle rumour that is making the rounds, **Al has not been fired by the Board, neither had he resigned.** Everything is in its place as it has been for the past eight years.

A Committee has been struck to examine all aspects of the Editor position, including the whole publication process to: a) determine if we can afford to pay our Editor, or retain the volunteer system; b) evaluate the current structure, processes, and techniques of publication; and c) examine and recommend suggested changes that may involve hi-tech electronic imagery and processing.

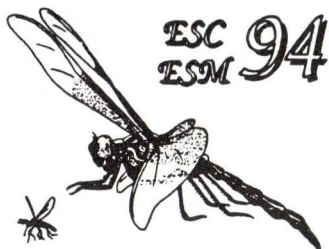
Publications have been our priority and it is gratifying that *The Canadian Entomologist* has retained its reputation as a first-class journal among entomological journals of the world. The *Memoirs* have also garnered international acclaim. Fiona Hunter has done an excellent job of assembling, developing, and producing the *Bulletin* - on time! These Editors deserve our warmest thanks for producing the excellent publications that we call our own.

There is one important aspect of our science that needs honest and constructive consideration. This concerns the theme, "*What is entomology today?*" We have all experienced the dramatic decline in entomological positions, whether they be in Universities, in federal and provincial services, or in commercial organizations. Trained entomologists are now filling positions that have been advertised as chemical ecologists, environmentalists, invertebrate zoologists, and a host of other "ists". We are training fewer entomologists and fewer job opportunities have arisen.

Everything is changing and we must change with it. But let us not despair that entomology *per se* is on the decline. It is changing, wearing new make-up and a new costume, but the need for entomological work is just as great and just as demanding as it has been in the past. If we recognize the signs of change (and I hope we do), we can make the appropriate adjustments and continue to have a sound and meaningful impact in solving our biological problems. We will also reap the rewards that inevitably follow.

Paul W. Riegert  
President, ESC

The 1994 Joint Meeting of the Entomological Society of Canada  
and the Entomological Society of Manitoba  
Second Notice



The 1994 Joint Annual Meeting of the ESC and ESM will be held on October 15 to 19, 1994 in Winnipeg, Manitoba at the Delta Winnipeg Hotel.

**"Insect Movement"** is this year's theme. During the plenary symposium, different aspects of insect movement will be addressed by leading scientists: M. Rankin, University of Texas at Austin, will discuss physiological features; S. Vogel, Duke University, will speak on the physical aspects of insect movement; B. Roitberg, Simon Fraser University, will address short range movement; and J. McNeil, Université Laval will be discussing long range movement.

An examination of **insect-host interactions and insect pest management** is included in the second symposium. Participants are as follows: J. Lewis, USDA, Georgia; J.K. Neilsen, Royal Veterinary and Agricultural University, Denmark; R. Karban, University of California; R.T. Roush, Cornell University; and S. Wikel, Oklahoma State University.

**Forest pest management in rural and urban environments** will be addressed in the third symposium. Speakers are D. MacLean, Canadian Forestry Service, Fredericton; J. Volney Canadian Forestry Service, Edmonton; D. MacLean, University of British Columbia; S. Smith, University of Toronto; and R. Gadawski, City of Winnipeg. Submitted papers sessions will follow each of the symposia.

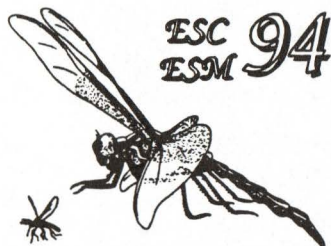
Workshops, which have been planned to date, include sessions on **biodiversity** and graduate student "survival." The latter workshop entitled **"Getting through Grad School,"** deals with choosing a graduate school and supervisor, advisor-student relationships, funding and publications. Members with ideas for additional workshop topics may contact Paul Fields.

The meeting will be held in the heart of Winnipeg, within a short distance of many major attractions. A tour of the Ducks Unlimited Conservation Centre, which is located in Oak Hammock Marsh, is being planned for Sunday, October 16.

Further updates and registration information on the joint meeting will be published in the upcoming issues of the ESC Bulletin.

For more information contact Mr. Don Dixon, Chairman, ESC-ESM Organizing Committee, Manitoba Agriculture, Agricultural Services Complex, 201-545 University Crescent, Winnipeg, Manitoba, R3T 5S6, phone (204) 945-3861, fax (204) 945-4327 OR contact Dr. Paul Fields, Chairman, Scientific Committee, Agriculture Canada, 195 Dafoe Rd., Winnipeg, Manitoba, R3T 2M9, phone (204) 983-1468, fax (204) 983-4604. Email: PFIELDS@MBRSW1.AGR.CA

La Réunion Conjointe de 1994 de la Société Entomologique du Canada  
et de la Société Entomologique du Manitoba  
Deuxième Avis



La réunion conjointe de la SEC et la SEM aura lieu du 15 au 19 octobre 1994, à Winnipeg, Manitoba à l'hôtel Delta Winnipeg.

**"Le déplacement chez les insectes"** est le thème de cette année. Pendant le symposium plénier, plusieurs perspectives du déplacement chez les insectes seront traitées par des chercheurs estimés: M. Rankin, University of Texas at Austin, discutera les questions physiologiques; S. Vogel, Duke University, traitera les problèmes biophysiques; B. Roitberg, Simon Fraser

University, parlera du déplacement à courte distance; et J. McNeil, Université Laval, examinera le déplacement à longue distance.

Le deuxième symposium discutera les **interactions insect-hôte**. Les participants seront: J. Lewis, USDA, Georgia; J.K. Neilson, Université Royale de Sciences Vétérinaire et Agricole, Danemark; R. Karban, University of California; R.T. Roush, Cornell University; et S. Wikel, Oklahoma State University.

La **gestion des insectes nuisibles dans les forêts urbaines et rurales** sera considérée dans le troisième symposium. Les participants sont: D. Maclean, Forêts Canada, Fredericton; J. Volney, Forêts Canada, Edmonton; D. Maclean, University of British Columbia; S. Smith, University of Toronto; et R. Gadawski, Ville de Winnipeg. Les présentations soumises suivront chaque symposium.

Les ateliers organisés à date sont la **biodiversité** et **"Comment survivre à l'école graduée"**. Ce dernier s'adresse au choix des écoles graduées et du directeur de thèse, les relations entre le directeur et l'étudiant, le soutien et les publications. Les personnes qui voudraient organiser d'autres ateliers peuvent contacter Dr. Paul Fields.

La réunion aura lieu dans le coeur de Winnipeg à l'hôtel Delta Winnipeg, à quelques pas de plusieurs attractions. Une visite à la réserve faunique de Ducks Unlimited située au marécage Oak Hammock, est prévue pour dimanche le 16 octobre.

Des renseignements supplémentaires sur le congrès seront publiés dans les prochaines éditions du bulletin de SEC.

Pour de plus amples renseignements adressez-vous à: **M. DON DIXON**, Manitoba Agriculture, Agricultural Services Complex, 201-545 University Crescent, Winnipeg, Manitoba, téléphone (204) 945-3861, télécopieur (204) 945-4327 ou **DR. PAUL FIELDS**, Agriculture Canada, 195 rue Dafoe, Winnipeg, Manitoba, R3T 2M9, téléphone (204) 983-1468 télécopieur (204) 983-4604. Courrier Électronique: PFIELDS@MBRSWI.AGR.CA.

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P. Kevan, Guelph, effective 1 January 1994

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P. Mason, 1995, Saskatoon  
J. Houseman, 1996, Ottawa  
S. Fitzpatrick, 1996, Vancouver  
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A.B. Ewen, *ex officio*, Dalmeny, until 31  
March 1994  
V. Behan-Pelletier, *ex officio*, Ottawa

F. Hunter, *ex officio*, St. Catharines  
B. Patterson, *ex officio*, Ottawa  
P. Kevan, *ex officio*, Guelph, effective 1  
January 1994

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P. Kevan, *ex officio*, Guelph

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Insectes des Légumes

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R. Footitt, Ottawa  
J. O'Hara, Ottawa  
G.H. Gerber, *ex officio*, Winnipeg

Status of Pollinators in Canada

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K.W. Richards, Lethbridge  
G.H. Gerber, *ex officio*, Winnipeg

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G.H. Gerber, *ex officio*, Winnipeg

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l'utilisation de la systématique

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D.C. Darling, Toronto  
J. Heraty, Washington  
G.H. Gerber, *ex officio*, Winnipeg  
L. Safranyik, *ex officio*, Victoria

### Treasurer's Report, 1993

The society finished the year 1992 with a financial deficit, as it did in 1991, and again due to increased costs related to publishing (especially production and mailing). All indications are that the 1993 financial year will end with a smaller deficit. With the implementation of the page charge and reprint charge increases the Society will be close to a balanced budget in 1994. Also, we will be able to avoid cashing any of the long-term bonds (at high interest rates) in our investment portfolio.

The joint book project with the Canadian Phytopathological Society (*Diseases and Pests of Vegetable Crops in Canada*) is still an unknown with respect to possible financial benefits or problems, as its publication has been delayed until recently. One can only hope that we gain financially.

Other segments of the Society finances continue to be strong, including our investment funds. The Scholarship Fund is growing; I am particularly pleased to see the first Kevan Scholarship award this year.

The Headquarters operations have had a stable year financially; rent dollars are coming in and we have had few extraordinary expenses.

This year has been a notable one for me as Treasurer of the Society because I see some strong indications that the Society is pulling out of its financial difficulties due in large part to some wise decisions by the Governing Board and by the tremendous efforts by many of our members who serve on committees and in other organizational aspects, to keep costs to a minimum.

As always, Sandy Devine is the person who really runs things at the Headquarters; I am deeply grateful for her efforts. Gary Gibson (Chair, Finance) has provided his usual valuable advice and support and I thank him sincerely.

Bob Footitt  
Treasurer

## Finance Committee Report, 1993

The Finance Committee reviewed the proposed 1994 ESC budget with the Treasurer and examined the following two items that had been brought to its attention:

1. information from the President of the Canadian Federation of Biological Societies that ESC is responsible for 1994 CFBS membership dues because CFBS bylaws require one year's notice for member societies to withdraw;
2. potential need to remunerate the scientific editor of *The Canadian Entomologist*.

The 1994 ESC budget proposed by the Treasurer estimated a gross deficit of approximately \$20,000, but a net surplus of about \$5,000 after investment income. The budget assumed proposed increases in publication charges would be accepted by members at the 1993 general meeting, but did not include potential 1994 CFBS membership dues or increased remuneration to the Editor. These additional expenses together could result in a net deficit of \$25,000 to the Society.

The Finance Committee determined the following regarding ESC membership in CFBS:

1. ESC was accepted as a regular member of CFBS and impressions that it joined on a provisional basis are erroneous.
2. ESC members initially voted to join CFBS with the understanding that they would be responsible for dues.
3. After members voted to join CFBS the Executive Council proposed that the Society absorb CFBS membership for 3 years, which was accepted by vote of members at the 39th annual general meeting, St. John's, Nfld., 1989.

Payment of 1994 CFBS dues would have a significant impact on the ESC. Increasing membership dues for one year to reflect CFBS dues undoubtedly would result in a loss of ESC members in 1994. The Finance Committee was concerned that once lost, members would not be regained in subsequent years. Alternatively, absorption of CFBS dues by the Society would again result in another substantial deficit in 1994. Consequently, the Finance Committee recommended:

1. The President seek legal advice concerning Societal obligations to CFBS.
2. Based on advice received, if necessary the Society absorb 1994 CFBS dues rather than increasing members dues for one year.
3. The 1994 members dues notice include a letter from the President requesting voluntarily payment of CFBS dues.

Based on current financial conditions of the Society, the Finance Committee recommended further that:

1. No new expenditures be approved without equal sources of increased revenue or decreased expenditures being designated to cover the expenses.
2. Remuneration for the editor of *The Canadian Entomologist* not be increased without first exploring other options. If increased remuneration is approved then this should be contingent on members approving increased page charges for *The Canadian Entomologist* to recover the expense. Based on approximately 1,000 published pages per year, the Finance Committee recommended a per page increase of \$1.00 per \$1,000.00 of negotiated remuneration.

The Finance Committee also noted that estimated income from membership dues in 1994 was \$21,340, whereas expenditures for the Society alone (excluding publications) were estimated at \$74,000,

resulting in a gross loss of \$44,000. Two items make up over 50% of budgeted Societal expenditures: the *Bulletin* (\$18,000 = 24%) and meetings (\$25,400 = 34%). These expenditures are acceptable only if a balanced budget is maintained. The Finance Committee had recommended in 1990 that grants to the Governing Board to attend annual meetings be eliminated or reduced substantially. Specifically, it was recommended that members of the Executive and Trustees continue to be subsidized, but Directors (Regional and At-Large) no longer be subsidized. This was not accepted by the Board, but it is again recommended because of the large net deficits incurred by the Society since 1991 [1991: -\$52,625; 1992: -\$41,885; 1993: -\$35,725 (estimated)]. The Board was also urged to monitor costs of meetings through rigorous application of current Societal bylaws.

Finally, the Finance Committee was concerned that it does not receive sufficient information throughout the year from other committees and the Executive in order to fulfil its mandate in a timely manner. Chairs of Societal committees are urged to inform the Finance Committee through the President of any actions that could affect Societal finances. The Governing Board is also urged to use the Finance Committee to examine financial implications of Board decisions prior to these being made.

Gary A.P. Gibson  
Chair, Finance Committee  
September 21, 1993

### History of ESC Association with CFBS

1. Probable amalgamation of Biological Council of Canada (BCC), of which ESC is a member, with Canadian Federation of Biological Societies (CFBS) is reported in "Presidents Update" in the *Bulletin* [1988, 20(4): 3; 1989, 21(1): 3]. A cost of \$30.00-\$35.00 per Canadian member is indicated.
2. Executive Council prepares for possible amalgamation. "Given that the status of B.C.C. is uncertain at present, and that B.C.C. is considering amalgamation with C.F.B.S., the Executive Council agreed that the President prepare an information letter on amalgamation process and a ballot for a referendum and circulate it to the members of E.S.C." (Item 9.2.9, Executive Council Meeting, Ottawa, April 23-24, 1989.)
3. President (Dr. D.C. Eidt) prepares one page information letter to members, dated May 5, 1989, which is sent with ballot. In the letter (attached) it is implied that the cost of \$35.00 per Canadian active member and \$10.00 per Canadian student member would be collected by the ESC. The ballot was sent to all ESC members, including foreign members. The ballot read: "Should the ESC join the CFBS? yes-no".
4. Members vote to join CFBS by a vote of 188 to 109 (with over 500 members not voting) (*Bulletin*, 1989, vol. 21(4): 103).
5. ? - Executive Council discusses membership of ESC with CFBS and proposes that CFBS dues be absorbed by the Society for 3 years (Note: this is inferred from the following action, but no evidence of such discussions was found in the minutes of the Governing Board meeting, Sept. 30 and Oct. 1, 1989).
6. ESC members vote for Society to absorb CFBS dues at 1989 general meeting. J.N. McNeil moved and R. Roughley seconded that the recommendation of the Executive Committee be adopted, which reads "Entomological Society of Canada will join the Canadian Federation of Biological Societies, effective September 1990 with no consequent increase in the Entomological Society of Canada membership dues before January 1, 1994." (Item 8.1, 39th annual general meeting, St. John's, Nfld., Oct. 3, 1989.)

7. President of ESC (J.N. McNeil) writes letter dated December 4, 1989, to Dr. M.A. Bisby, president of CFBS, requesting membership. The letter reads, in part: "By the present The Entomological Society of Canada would like to officially apply for membership to the Canadian Federation of Biological Societies."

8. Secretary of CFBS sends letter, dated March 8, 1990, to secretary of ESC (Dr. J.A. Shemanchuk) officially welcoming ESC to CFBS.

Gary A.P. Gibson  
Chair, Finance Committee

### **Report of the Headquarters Committee, 1993**

A contractor was hired to fix the major repairs to the house at 393 Winston Avenue in Ottawa. These repairs include replacing each shingled roof over the basement and backdoor entrance ways, replacing and painting water-damaged drywall, fixing a rotting wooden deck over the back entrance way, and installing a dead bolt on the exterior basement door.

Of the \$3000.00 budgeted in 1993, \$1750.00 has been spent as of November 1 1993, with an additional \$1250.00 allocated to finish the work by the end of the year.

Jeffrey Cumming  
Committee Chair

### **Comité des bourses de voyage pour étudiants gradués - Rapport annuel 1993**

Des avis concernant l'octroi de bourses de voyages pour étudiants gradués ont été publiés dans les numéros de septembre et de décembre du *Bulletin* (24(3): 137-138; 24(4): 230-231). Le récipiendaire pour 1993 est M. R. A. Cannings du Département de Biologie Environnementale de l'Université de Guelph. Le nom du gagnant a été publié dans le numéro de juin du *Bulletin* (25(2): 56).

Le comité des bourses de voyage pour étudiants gradués était composé, en 1993, de:

Dr. G. Boivin (Président), Agriculture Canada, Saint-Jean-sur-Richelieu  
Dr. D. Coderre, Université du Québec à Montréal, Montréal  
Dr. P. L. Dixon, Agriculture Canada, St-John's  
Dr. P. Martel, Agriculture Canada, Saint-Jean-sur-Richelieu  
Dr. P. W. Riegert (*ex officio*), University of Regina, Regina.

Guy Boivin  
Président

### **Report of Ad Hoc Committee to Promote Systematics Research in Canada**

In response to Glenn Wiggan's Gold Medal address, a committee including Chris Darling, John Heraty, and Steve Marshall met following the 1992 ESO meetings in Kingston. Based on that meeting and feedback from the Biological Society of Canada, it was felt that the option of seeking direct government action in the form of a funded Biological Survey of Canada was not practical at this time, and that we should instead make an effort to promote systematics from the broader base of the systematics community as a whole. Some time after that meeting it came to our attention that the Task Force on Canadian Systematics, an idea raised at the Systematics Workshop the previous June, had been established and was setting out to address the same problems as our ESC committee.

Nonetheless, we feel our committee can still contribute to this effort by obtaining ESC endorsement for the Resolution on Biosystematics and Biodiversity developed by the scientific committee of the Biological Survey of Canada, and using that document as a starting point from which the ESC can spearhead a societal working group on biodiversity and systematics. Such a group could ensure input from the scientific societies into Canada's biodiversity policy and ensure a unified position with regard to support for systematics. It is, therefore, our recommendation at this time that the President of our Society send a letter to the Presidents of our sister Societies asking for their support for the above-mentioned resolution, and for their cooperation in forming a societal working group.

S.A. Marshall  
Committee Chair

### **Report of *Ad Hoc* Committee on Biological Control Regulations**

For the edification of ESC members, the Committee chair compiled the text of the Biocontrol Forum, 1992 ESC Annual General Meeting, for publication in the December issue of the *ESC Bulletin*. Because some of the speakers gave me expanded versions of their talks, I submitted their entire presentations for publication in the next issue of *Biocontrol News*.

In January, Plant Industry Directorate, Ottawa, convened a meeting of interested individuals regarding the formulation of minimal regulation procedures for the commercial use of biocontrol agents (insects, mites and nematodes). I was invited to attend the meeting as the ESC representative. In preparation for the meeting PID sent attendees a binder of written material, including a section on suggestions for regulation and registration of biological control agents.

Many of the individuals I previously contacted about serving on the *Ad Hoc* committee attended the PID meeting in their own right. Of the 26 attendees, 13 were ESC members. I therefore contacted 10 other ESC members for their views on biological control regulation in general and their thoughts on the PID suggestions in particular. I received nine replies, some of which were very detailed. In effect, 23 ESC members had a chance to add input into the regulations workshop.

The Workshop developed practical and workable guidelines for biocontrol regulations using insects, mites and nematodes.

After the Biological Control Regulations Workshop in Ottawa in January of 1993, Plant Industry Directorate of Agriculture Canada sent the workshop proceedings and the guidelines which were drafted at the workshop to attendees for their comments. I circulated the draft guidelines to ESC members who had commented on the initial PID working paper for their opinions. I received detailed replies from four people, and incorporated their suggestions for improvement into my response to PID. When the replies from all attendees were received, PID incorporated these into a revised document which was then circulated in early August as a draft regulatory proposal. To date I have not seen the latest proposal, but apparently portions of the final draft bear little resemblance to material which had been included in the workshop draft. In the new guidelines, all inundative releases in the field, research or commercial, no matter what their scale, would require regulatory permits. At the moment, members of the Inundative Group of the workshop are lobbying PID for changes to the draft. The core managers of the new regulatory system, i.e., regulators from Agriculture Canada, Health and Welfare, and Environment are meeting on 15 September to discuss the final draft.

J.J. Soroka  
Committee Chair

## Common Names of Insects - A brief history of the new Canadian list

One of the earliest lists of common names of insects in Canada, "Noms français des insectes du Canada", was published in 1947 by the Ministre de l'Agriculture du Québec for the Société pour la Protection des Plantes du Québec (SPPQ). It contained English as well as French and Scientific names, combined and listed together alphabetically. It was updated by the SPPQ in 1952, 1964 and 1975.

In the late 1970's the Entomological Society of Canada (ESC) decided to produce a revised list of English common names similar to the Entomological Society of America's (ESA) "Common Names of Insects" which had been updated in 1975 and 1978. Dr.W.Y.Watson, Chair of the ESC's Insect Common Names and Cultures (ICNCC) from 1978-1985, was asked to draw one up. A few copies of his list were printed in 1984 and sent to the members of the Committee for correction and comment.

Meanwhile, Dr.P.Benoit, Chair of the Committee of French Names of Insects in Canada, was again updating the SPPQ list. He published the new list in 1985 as *Nomenclature Insectorum Canadensium* with a Supplementum in 1986. The combined lists contained 2401 names.

A change of policy led the ESC to use Benoit's as the basis of a joint ESC and SPPQ list which would be maintained by the two Societies. The main reason was that a bilingual list was thought to best reflect the interests of Canada. Dr.H. Madsen, President of the ESC in 1985, began negotiating with his counterpart in the SPPQ for the loan of the computer tapes so that the Committee could begin revising and updating the list. Problems arose about copyright and discussions between the two Societies continued until 1990 when Dr.J. McNeil, then President of the ESC, was able to negotiate an agreement and obtain the SPPQ data.

Dr.L. Speers of the Biological Resources Division (BRD) of the Centre for Land and Bioresources Research converted the list to a database. Order and Family were entered for each record so that the names could be sorted taxonomically. Since then, members of the Committee, BRD taxonomists and several other authorities have checked various parts of the list, updating many of the common and scientific names. Some new names have been added and the archival database now contains 2510 records.

The new ESC list which is now on disk contains only 1640 records. It has been fairly closely restricted to common names of Arthropods of importance or conspicuous appearance that are currently used, for example, by extension workers, farmers, foresters amateurs and the media.

Over the years the ESC has discussed producing a joint list with the ESA. But there are copyright problems and different procedures for adding and changing names. The main reason for keeping the lists separate, however, is that the ESA wants to restrict its list to insects that occur in the United States. Although we have a large number of insects in common, many Canadian insects do not occur in the US and even more southern and Hawaiian insects are not found in Canada. A few species found in both countries have different common names. These have footnotes on the new ESC list which is arranged alphabetically by English name, accompanied by its current Scientific name, French name (if any), Order and Family. Details of how to purchase and use the disk will soon be available. If there is demand, a second disk could be produced with the list sorted by the French or Scientific names or by Order and Family.

E.M.Belton, ICNCC Co-Chair  
Burnaby, British Columbia

## Publications Committee Report, 1993

Members of the Publications Committee (PC) are: R.S. Anderson, L.M. Dosdall, B.A. Keddie, P.G. Kevan, P.G. Mason, and S. Smith. V.M. Behan-Pelletier (Scientific Editor, *Memoirs*), A.B. Ewen (Scientific Editor, *The Canadian Entomologist*), F.F. Hunter (*Bulletin* Editor), B. Patterson (Managing Editor), and P.W. Riegert (President) are *ex officio* members.

The PC recommended that page and reprint charges for both *The Canadian Entomologist* and the *Memoirs* be increased, in agreement with the proposal made by the Finance Committee.

The PC was directed by the Governing Board to ensure that a detailed, written description was completed of the duties and responsibilities of the Managing Editor of the Society's publications. The initial draft of this document was prepared by Barbara Patterson, and finalized following revisions suggested by Scientific Editors A.B. Ewen and V. Behan-Pelletier, and Vice-President G. Gerber. At the Executive Council meeting in April, President Riegert met with Ms. Patterson to finalize details of the position description.

At the request of the Governing Board, the PC identified several measures which could make production of the Society's journals more cost-effective. These measures included reducing the page sizes of both journals, reducing paper quality, requiring authors to submit manuscripts on diskette, publishing *The Canadian Entomologist* quarterly rather than six times per year, and switching printing companies to one that would perform the job at a cheaper rate. The PC also recommended employing the services of a professional communications and design consultant to co-ordinate various aspects of re-design and to develop new cover pages for ESC journals. The Executive Council advised that the ESC should retain the current format of its journals and should undertake further study of typesetting.

The Executive Council assigned responsibility to the PC for copyrighting, duplicating, and distributing the ESC List of Common Names of Insects in Canada which was completed near the end of the term of the present PC. The PC requested that E.M. Belton, Co-chair of the Common Names Committee, investigate the cost of duplicating the diskettes, and the ESC Marketing Committee Chair was contacted to assist with advertising the availability of the list. Distribution of the list, by the new PC, will proceed in 1994.

Two applications for page-charge waivers were approved in 1993 for a total of 48 published pages. Although several applications for waivers were submitted for the special issue of *The Canadian Entomologist* arising from the G.E. Ball retirement symposium, funding for these submissions was obtained from the Department of Entomology, University of Alberta.

Twenty-nine book reviews and 11 book notices were published in the *Bulletin*; several other books are in various stages of review for future issues of the *Bulletin*.

L.M. Dosdall  
Chair, Publications Committee

## Bulletin Editor - Annual Report, 1993

The total number of printed pages for the 1993 ESC *Bulletin* is slightly lower than in 1991 or 1992. This is due to (1) a more conservative use of space on my part and (2) a decrease in the number of member submissions. I will continue to try to pare down the *Bulletin* because this saves on both printing and mailing costs. I would like to thank Lloyd Dosdall, Gilles Boiteau, Linda Gilkeson, and the other

members who sent me items for the 1993 *Bulletin* on diskette or via email. This saved me a great deal of time and effort.

I had anticipated receiving a flurry of letters concerning the CFBS issue, but members were decidedly apathetic. In the March issue (pp. 2-3) Jeremy McNeil argued that members of the ESC should consider staying in CFBS. In the June issue (p. 57) Al Ewen argued against membership in CFBS. There was not a single "Letter to the Editor" concerning CFBS! In the September issue (p. 108) Terry Galloway, Chair of the Elections Committee, reported that 134 had voted NO and 33 had voted YES to CFBS.

The March issue was 52 pages long and contained a "green insert" on the "Status of entomological research on insect transmitted plant diseases in Canada" by Gilles Boiteau et al. There was no President's Update. There were nine pages of information on the Annual General Meeting in Sault Ste. Marie, sent as camera-ready artwork by Jean Turgeon. I apologise for printing these pages incorrectly (french and english versions should have been front and back). There were 7 pages of Book Notices and Reviews.

The June issue was also 52 pages long and contained a "green insert" on "Pest management policy" by Linda Gilkeson et al. Fifteen pages were devoted to the Sault Ste. Marie Meeting. This time, I got it right (pp. 59-73)! The 11 page Auditor's Report was printed just as it was sent to the ESC. This also saved me a great deal of time and noone complained that the fonts were different! There were 8 pages of Book Notices and Reviews.

In total, the September issue was only 28 pages long. There was nothing to report from the President and other Society business was sparse. I received my copy of the September *Bulletin* on September 2nd. This is certainly a new record for Hignell Publishing! However, mailing labels were temporarily misplaced in Winnipeg somewhere, so that by the time of the Sault Ste Marie meetings (at end of September) only a handful of members had received their copies.

Fiona F. Hunter  
*Bulletin* Editor

### **Report of the Scientific Editor - *Memoirs***

From September 1992 to August 1993 only two manuscripts have been submitted to the *Memoirs* for publication, one of which is the Symposium on Peatland Arthropods from the ESC Meeting in Montreal 1991, edited by A. T. Finnamore and S. A. Marshall. Of these manuscripts, one is in press and the second has almost completed the review process. There is no apparent reason for the decline in submissions in 1993, and based on correspondence I have had on potential submissions in 1994, it does not seem to indicate a trend.

Four *Memoirs* will appear in 1993 (nos. 165-168), of which the first two, totalling 357 pages are published.

Especial thanks to Al Ewen this year who acted as Scientific Editor for a manuscript that I submitted to the *Memoirs*, in addition to giving me help and advice. Thanks also to the anonymous reviewers who have given their time and expertise, and particularly to Barbara Paterson and Sandy Devine for their continuing help, patience and cheerfulness.

Thank you for the privilege of serving the Society as Scientific Editor, *Memoirs*, and I am happy to continue in this role if that is your wish.

Valerie Behan-Pelletier  
Scientific Editor, *Memoirs*

## Report of the Scientific Editor - *The Canadian Entomologist*

**EDITORIAL OFFICE** - From 1 September 1991, through 31 August 1993, costs for services and supplies for the editorial office have been ca \$9404 or \$790 per month. The major expenses have been for word processing (ca \$6535), postage and supplies (ca \$1745), and telephone (ca \$1215).

**PEOPLE** - Dr. J. Régnière has resigned as Associate Editor, citing pressures of work and the time available to him. For now, all manuscripts on population modelling will be handled by Associate Editor Dr. R. Fleming. Two Associate Editors, Drs. Dave Pree and Robin Leech are in Australia for a year; they will continue to serve in their new locations.

**MANUSCRIPTS** - From 1 September 1992 through 31 August 1993, 193 manuscripts have been submitted. Their disposition was:

In review - 50; In revision (A) - 35; Withdrawn (B) - 5; Accepted (C) - 72; Rejected (D) - 31

Rejection Rate  $(D+B)/(A+B+C+D) = 25.2\%$

About 82% of the manuscripts submitted were returned to authors within 12 weeks of the submission date.

Up to 31 August, 146 manuscripts were submitted during the 1993 calendar year. This total is higher than in any other year during my tenure as editor. Apparently the decline in the number of manuscripts submitted seen during the past 2 years was a temporary aberration although we are still not attracting what I would consider our fair share of manuscripts on applied agricultural entomology and applied forest entomology.

I estimate that 1200-1300 pages will be published in *The Canadian Entomologist* in 1993 (783 in the first four issues). One C.P. Alexander Fund Invitation paper was published in the first issue of 1993 and two more are in preparation but will not be published before year's end.

**CHANGES TO INSTRUCTIONS TO AUTHORS** - With the agreement of the Chair, Publications Committee, three minor additions to the Instructions are recommended:

- (1) **Add:** "Use the Torre-Bueno Glossary of Entomology (1989 or later) as a reference for definitions of entomological terms."
- (2) **Add:** "Only members of the Society may apply for waiver of page charges."
- (3) **Add:** "The Society may publish Feitschrift, proceedings from Society symposia, commemorative issues, and so on, but only as part of the *Memoirs* series."

**THE FUTURE** - The job as Scientific Editor for *The Canadian Entomologist* has become much more time consuming than in past years and is more than reasonably can be expected from any volunteer. I wish to remind the membership of a recommendation from a previous Scientific Editor (D.C. Eidt) in 1983; Dr. Eidt strongly recommended that the Society pay its Scientific Editor. Now, in 1993, I lend my unqualified support to Dr. Eidt's recommendation.

At this time, I wish to inform you of my intention to resign as the volunteer Scientific Editor of *The Canadian Entomologist* effective 31 March, 1994. Assistant Scientific Editors C.H. Craig and R.H. Elliott wish to resign their appointments effective immediately.

KUDOS - As always, my sincere thanks go to the Associate Editors and Assistant Editors. These people have served this Society extremely well, some for many years, and they deserve all the appreciation that we can give. They certainly have mine. I want to thank Lloyd Dosdall (Chair, Publications) and President Riegert for their help and support, and Sandy Devine and Barbara Patterson for their continued good work for the Society. And last, my personal thanks to the scientists who gave freely of their time and expertise to review manuscripts.

I have enjoyed this job and I thank the members of the Entomological Society of Canada for the privilege of serving as Scientific Editor for the past 8 years..

Al B. Ewen

Scientific Editor

(Dated September 3, 1993)

### **A New Scientific Editor for *The Canadian Entomologist***

In his 1993 report of the Scientific Editor - *The Canadian Entomologist*, Dr. Al B. Ewen informed the Governing Board of the Society of his intention to resign effective March 31, 1994. He could no longer continue the very substantial volunteer effort required, although he would consider continuing in a paid capacity. He also reported to the Board that no Associate Editor was willing to assume the role of Scientific Editor.

The Board concluded, especially in view of recommendations by the Finance Committee that remuneration should be paid to the Scientific Editor only if all other options failed and then only with a concurrent increase in page charges, that it would be much preferable to find a way to continue the Scientific Editorship as a voluntary position. They asked Dr. H.V. Danks to head a search committee that not only would seek a replacement editor, but also would consider options relevant to the Scientific Editorship of *The Canadian Entomologist*, such as how the roles of the Scientific Editor, the Assistant and Associate Editors, the Managing Editor, and so on might be restructured if appropriate. Options were required relatively rapidly because it would be desirable to have some period of transition before March 31, 1994, when Dr. Ewen would cease to serve as a volunteer.

Following consultations with some knowledgeable members (unfortunately, the approaching deadline did not allow a wider notice, for example in the *Bulletin*) the simplest option was found to be feasible. A highly qualified replacement volunteer editor was found. Dr. Peter G. Kevan agreed to serve as Scientific Editor for *The Canadian Entomologist* beginning in 1994.

The Governing Board has ratified this process by confirming that the position of Scientific Editor should continue as a volunteer unpaid position, with only a modest honorarium. (Whether some limited adjustment of honoraria for Trustees is called for is being considered further by the Finance Committee.) The Board appointed Dr. Kevan as Scientific Editor - *The Canadian Entomologist* effective January 1, 1994, when he will begin to receive manuscripts submitted, taking over the position fully on March 31, 1994. Nevertheless, the Board confirmed that the new Editor, with the Chair of the Publications Committee and others, should continue to investigate options for the roles of the Scientific Editor and others responsible for production of the journal. Furthermore, the Board approved a policy aimed at eventually streamlining the printing process, which would require the submission of final typescripts on diskette. Last but by no means least, the Governing Board, reinforcing the action of the Society's 1993 Annual General Meeting, formally thanked Dr. Ewen for his considerable and invaluable efforts on

behalf of the Society during the eight-year period that he served as Scientific Editor.

Although the Society therefore accepts Dr. Ewen's resignation with regret, it is very happy to introduce Dr. Kevan as the new editor of the journal. Dr. Kevan is well known to many members of the Society. He is an experienced scientist who has published widely in various scientific journals. Moreover, Dr. Kevan has experience in editing the scientific journal of a regional society, and is familiar with electronic handling of submissions. I trust that all members will give Dr. Kevan their full cooperation as he begins this important task.

H.V. Danks  
Chair, Editorial Search Committee

### *The Diseases and Pests of Vegetable Crops in Canada*

This book, conceived as a joint project between the ESC and the Canadian Phytopathological Society, began in 1986/87. An ESC Steering Committee, struck for this purpose, comprised Drs. R.S. Vernon (British Columbia), W.J. Turnock (Prairies), R.P. Jaques (Ontario), G. Boivin (Québec), L.S. Thompson (Maritimes) and J.A. Garland (Chair). This steering committee met once, in 1989 at the ESC Annual Meeting in St. John's, Nfld., and it had largely fulfilled its charge a year ago with the review of the text (English version). The work remaining has involved the illustrations, and galley proofs. A product seemed ready to print this fall. A pre-publication announcement to this effect, demonstration copies of both the French and English versions of the book, and examples of colour page layouts and the design of the front cover were displayed at the International Congress of Plant Pathology in Montreal at the end of July, 1993. About the same time,

- figure captions (colour plate and text half-tones) were finalised;
- Hadwin Graphics finished scanning the 1000+ colour and black-and-white photographs;
- permission to use diagrams showing disease cycles of 6 pathogens was received from a publisher in Florida;
- colour photos of 2 exotic insect pests named in the book were obtained on loan from the University of California, Davis; and
- galley proofs (English) of the 24 crop chapters were corrected and returned to the printer, M.O.M. Printing Ltd. of Ottawa.

Also, at our request, the Plant Protection Division of Agriculture Canada reviewed sections of the book pertaining to pests legislated under the Plant Protection Act.

Mme. Christine Thériault kindly agreed to translate all textual material for the French version, including figure captions. Drs. Claude Richard (CPS) and Guy Boivin (ESC) accepted the enormous task of reviewing the French translation and editing the French galley proofs.

Drs. Richard Ring and Howard Harding, Past-Presidents of the ESC and CPS respectively, maintained communication between the Executive councils of the two societies and during the year participated in two conference calls pertaining to editing the book. The CPS and ESC jointly decided that the initial print run would consist of 4000 English and 1500 French copies, and the book would be available as hard- and softcover editions.

Finally, correspondence and matter pertaining to the book was archived.

J.A. Garland

## **Science Policy Committee Report, 1993**

The chairman wrote to the members of the Science Policy Committee and put a notice in the March *Bulletin*, asking for suggestions of issues and projects related to science policy in Canada that this committee may take on during the next few years. No suggestions were received. In recent years, the ESC has not been active in the field of science policy in Canada and has relied on the Science Policy Committee of the Canadian Federation of Biological Sciences to look after science policy matters for us. Since the ESC will be withdrawing from CFBS in 1994, the ESC Science Policy Committee will have to look after science policy matters again. The Governing Board of the ESC needs to evaluate science policy as it relates to entomology and to give the Science Policy Committee some direction on issues and projects that this committee may take on during the next few years. We can no longer rely on others to look after our interests in the field of science policy in Canada.

The chairman wrote to Mr. Peter W. Perrin, Pest Management Alternative Office investigating whether it is possible for the ESC to have a representative on the Board of PMAO. Mr. Perrin responded by indicating that he would take our request to the Board in December 1992. To date, there has been no response from the Board of PMAO. Since membership on the Board of PMAO has already been determined, I am assuming that the ESC was not successful in getting representative on the PMAO Board. This matter will not be pursued further.

Committee members included L. Safranyik (Vice-Chair), N.J. Holliday, P.L. Dixon, D.L. Johnson, J. Soroka (*ex officio*), and S.A. Marshall (*ex officio*)

G.H. Gerber

## **Report of the Public Education Committee, 1993**

Only the Acadian Entomological Society submitted application for Student Encouragement Grant first for \$200, then a second application for an additional \$400, the previously unclaimed portion of the \$600, the maximum amount allowed to accumulate. The first request was approved and a cheque for this amount was handed over to the Regional Society at the annual meeting by Dr. Robert Footitt, the Treasurer of ESC. The second request was also approved and the cheque is being issued. The Acadian Entomologist will use the funds towards supporting teaching entomology in the schools and the Newfoundland Insectarium.

The remaining affiliated societies have yet to submit proposals for funding. The Regional Directors of the affiliated societies have been contacted in this regard. The Regional Directors are encouraged to bring the existence of the Student Encouragement Grant of ESC to the attention of their Public Education Committee and inform them that each Affiliate Society is eligible to apply for an annual grant of \$200 for public education.

Imre S. Otvos

## **Heritage Committee Report, 1993**

Detailed summaries of the Time and Place of Annual General Meetings, Society Officers, and other Executive Members of the Entomological Society of Canada, as well as each of the Regional Entomological Societies, have been initiated. Summaries for the Saskatchewan and Alberta societies are complete; work on others is progressing well. No submissions or contributions of entomological information were made to the National Archives in Ottawa in 1993.

Paul W. Riegert

## Scholarship Committee Report

There were eight qualified applications for the Postgraduate Scholarship this year. The successful candidates were Scott Digweed, a student enrolled at the University of Edmonton working under the supervision of John Spence, and Daniel Doucet, a student enrolled at L'Université Laval working under the supervision of Michel Cusson.

This is the first year that the Keith Kevan Award was offered. There were six qualified applications and the winner was Wanda Kuperus, a student enrolled at the University of Regina working under the supervision of Bill Chapco.

The Governing Board appointed an ad-hoc committee in January 1993 to administer the first Kevan Award. The Governing Board proposed changes to the standing rules so that the Kevan Award could be administered as a subcommittee within the Scholarship Committee. These changes were approved by the membership at the Annual General Meeting. The next Keith Kevan Award will be offered in 1995.

Paul Fields

## Student Affairs Committee - Annual Report 1993

The "Grant Writing" Workshop that was held at the 1993 Annual Meeting in Sault Ste. Marie was a great success. We are grateful to the local organizing committee for providing financial support for speakers. Summaries of the information presented by the speakers will be published in the March issue of the *Bulletin*.

Current issues of concern to students are the types and numbers of scholarship/awards available to students and increasing the student membership in ESC. The student affairs committee would like to be involved with the relevant committees to work on these issues. In addition, the availability of employment opportunities in entomology is a major concern. An employment booth should be set up at each annual meeting. In addition, it may be time to undertake a new manpower study (done in 1976 and 1984).

As I will soon no longer be a student and have spent four years on the committee, two as chair, I am resigning my position. Elizabeth Tomlin, a current member of the committee, has agreed to take over. Two or three new student members are required to serve for the next year.

Kenna MacKenzie

## Message from the New Chair of the Student Affairs Committee

The Student Affairs Committee is considering running another workshop next year on employment opportunities in entomology. If anyone has any ideas or comments on this proposed workshop, or any other issue, I would be happy to hear them. I can be reached at (604) 291-4163 (phone), elizabeth\_tomlin@sfu.ca (e-mail), or Dept. Biol. Sci., Simon Fraser Univ., Burnaby, B.C. V5A 1S6. Rob Anderson, from the University of Manitoba, is proposing to run another workshop on surviving graduate school at this meeting, and is also soliciting any ideas that the members may have. He can be reached at (204) 474-9439. Any students interested in serving on the committee should let me know by telephone (604) 420-5318, or e-mail, tomlina@sfu.ca. I look forward to hearing from you.

Elizabeth Tomlin

## **Report of the Bilingualism Committee, 1993**

The Committee's mandate for 1993 was to have the ESC Committee Guidelines and By-Laws translated into French. This work was completed by August and following revision by the Committee, hard copies of both documents, as well as a disk with the translations in WordPerfect for IBM format, were sent to Dr. Dan Quiring, Chair of the Rules and Regulations Committee. The Rules and Regulations Committee (in collaboration with the Bilingualism Committee) will be responsible for keeping these texts up to date on an annual basis. The total cost for the translation was \$1500. Translations of the curriculum vitae of one of the second vice-presidential candidates and the director-at-large, requested at the last minute, were completed on time at a cost of \$125. I translated a letter from President Riegert, concerning the ESC commitment to the Canadian Federation of Biological Societies. At the request of Dr. G.H. Gerber, I have agreed to act as Chair of the Bilingualism Committee for 1994. Drs. J. Brodeur (Laval University) and M. Cusson (Forestry Canada, Quebec Region) will serve as the other two members.

Johanne Delisle  
Chair, Bilingualism Committee

## **Entomological Society of British Columbia - Annual Report**

The society held its annual meeting on October 23, 1992 at the Halpern Centre at Simon Fraser University. The meeting was held in conjunction with the annual H.R. MacCarthy Pest Management Lecture and both were well attended. This year's guest lecturer was Dr. Stan Finch, a research entomologist with the Horticulture Research International, Wellesbourne Warwick, England, and he spoke on "Integrated Pest Management in Field Vegetable Crops - The Challenge Facing Research Scientists".

The society is in sound financial condition and has been active on a number of fronts:

- the education committee has funded two school projects to increase interest and education in entomology.
- the society library has been moved to the Natural Resources Canada, Pacific Forestry Centre in Victoria where the collection has been reviewed and put in order.
- some of the preliminary work involved in hosting the 1995 joint ESC/ESBC meeting has been carried out.
- volume 89 of the *Journal of the Entomological Society of B.C.* has been published.

The annual meeting will be held in Victoria, at Pacific Forestry Centre on October 20, 1993

Terry Shore, ESBC Regional Director

## **Entomological Society of Alberta - Annual Report**

The 40th Annual Meeting of the Entomological Society of Alberta was held in Jasper at the Chateau Jasper Hotel, October 15-17, 1992 with 63 members in attendance. Twenty-three submitted papers and two posters were presented. Dr. Joseph Elkinton, Department of Entomology, University of Massachusetts (Amherst) gave the keynote address in which he summarized his recent research on the gypsy moth. Dr. Jari Niemelä, Killam Post-doctoral Fellow at the University of Alberta, related his field experiences in Finland and Argentina in an after-banquet talk entitled "Entomology on the Top and Bottom of the World".

This being the fortieth meeting, the Society especially recognized its founding members. These

people will receive letters of appreciation. Dr. Paul Riegert was the only founding member in attendance. Dr. Dan Johnson was congratulated for receiving the 1992 C. Gordon Hewitt Award.

The proceedings of the 39th Annual Meeting (Waterton, Alberta) were published in January 1993, and the proceedings of the Jasper meeting (40th) are expected in October of this year.

The 41st Annual Meeting will be held in Lethbridge at the Agriculture Canada Research Station, October 14-16, 1993. Highlights will be a symposium entitled "Overwintering Strategies in Insects" with keynote speaker Dr. Roger Moon, University of Minnesota and a banquet address by Dr. Renée Barendregt, Department of Geology, University of Lethbridge.

Bev Mitchell, ESA Regional Director

### **Entomological Society of Saskatchewan - Annual Report**

The ESS was active in promoting entomological education for students this summer. The University of Saskatchewan held eight sessions of a week-long Ecology Field Camp in which 20 students were exposed to ecological tenets and practices. ESS members gave talks and demonstrations of entomological principles and practices at all eight camps. ESS members also provided instruction in theoretical and practical entomological issues to students attending the Native Student Summer Science camp sponsored by the Faculty of Agriculture of the University of Saskatchewan.

At the spring meeting of the ESS in April a draft working paper of the ESS position on insect rights was presented by the Ad hoc Insect Rights Committee to the membership for consideration. The draft will be discussed at the fall meeting.

The fall meeting of the ESS will be held on October 7 and 8 at the boardroom of the Agriculture Canada Saskatoon Research Station. The theme of the plenary session is "Backyard Entomology". Guest speakers include Roy Ellis of Prairie Pest Management, Carman, MB, discussing mosquito control, a very current topic given the tremendous mosquito populations in the province this summer, and Jake Dreger, PCO Pest Control Saskatoon discussing recent innovations in commercial pest control practices. An update on the status of Dutch elm disease in the province will also be given, as well as numerous scientific papers.

Juliana J. Soroka, ESS Regional Director

### **Entomological Society of Manitoba - Annual Report**

1. The 48th Annual Meeting of the Entomological Society of Manitoba was held on 5-6 November 1992 in Winnipeg. Dr. Tom Barker and Dr. Ralph Howard were the out of town invited speakers with the symposium focusing on chemical ecology.

2. The 49th Annual Meeting of the Entomological Society of Manitoba will be held on 4-5 November 1993 in Winnipeg. Dr. Allen Ashworth and Dr. Terry Erwin will be the out of town invited speakers with the symposium focusing on biodiversity and climate change.

3. Under the direction of editor Richard Westwood, a new and expanded Proceedings of the Entomological Society of Manitoba has a new larger format with 4 scientific papers, abstracts from the 1992 Annual Meeting and society business. It is the goal of the society to publish the Proceedings annually with several scientific papers each volume dealing with topics of entomological interest particular to the prairies.

4. Other activities of the society include: 4 issues of the Entomological Newsletter, the first in the series

of Distinguished Speakers with Dr. Don Schwert speaking on Pleistocene Insects and Climate Change and several presentations to school groups.

5. The preparations for the 1994 ESC-ESM Joint Annual Meeting will be reported separately.

Paul Fields, ESM Regional Director

### **Entomological Society of Ontario - Annual Report**

The 1992 Annual General Meeting of the Entomological Society of Ontario (ESO) was held in Kingston Ontario on 23-25 October and hosted by Queen's University. The meeting featured 2 symposia: "Insect Plant Relationships" and "Insect Biotechnology". Ms. Samantha Song, University of Toronto, received the 1992 Travel Award while the President's Prize for student presentations was given to Mr. Andrew Applejohn, University of Toronto. Ms. Cindy Jamieson, Lakehead University, has been selected as recipient for the 1993 ESO Travel Award.

Volume 123 of the PROCEEDINGS of the Entomological Society of Ontario (1992) was produced in February 1993 and included 4 papers and 1 extensive taxonomic review of *Anaphes spp.* The revised Constitution of the ESO has also been reproduced in Volume 123. Volume 124 (1993) is currently in press and includes a large monograph by University of Alberta contributors. Several papers have already been accepted for Volume 125 although additional submissions are being accepted. The PROCEEDINGS currently has a print run of 500 copies distributed to ca. 230 institutional subscribers in over 20 countries, ca. 200 members and on an exchange basis with ca. 60 foreign journal publishers.

A publication entitled "**Entomology in Ontario**" has been produced by Yves Prevost, Lakehead University, and Peter DeGroot, FPMI, which outlines background information on employers of entomologists and their staff in Ontario.

The University of Guelph has provided the Society with an on-campus office and archival materials have been transferred from their former storage to McLaughlin Library for professional preservation and cataloguing. This latter achievement has been due to the extensive efforts of Mr. David Hull, ESO Librarian, to whom our Society is immensely grateful. Access to ESO archival materials are freely available to all ESO members, on request. Members visiting the University of Guelph may also request use of the ESO office for the duration of their stay by contacting Dr. Peter Kevan, Department of Environmental Biology, in advance.

Tom Mason, Invertebrate Curator, Metropolitan Toronto Zoo, P.O. Box 280, West Hill Ontario M1E 4R5 has accepted responsibility for production of the **Amateur Entomologist Newsletter** on behalf of the Entomological Society of Ontario. Contributions or questions pertaining to this publication should be directed to the above address.

R.S. MacDonald, ESO Regional Director

### **Rapport du représentant de la Société d'Entomologie du Québec**

La réunion annuelle de la Société d'Entomologie du Québec, tenue à l'Université du Québec à Chicoutimi les 15 et 16 octobre 1992, a obtenu un franc succès. Le symposium avait pour thème "L'entomologie et l'informatique au service de la faunistique" et a donné lieu des conférences de spécialistes du Québec, du Canada, de la France et de la Belgique. Une vingtaine de communications scientifiques ont également été présentées, dont celle de Mad. Joan van Baaren, qui a obtenu le prix Melville Duporte pour la meilleure présentation étudiante. Ce congrès a également permis au Dr André

Francoeur et collaborateurs de présenter aux entomologistes québécois la banque informatisée des insectes du Québec (BADIQ). Le Dr René Béique a été reçu comme membre honoraire de la Société alors que M. Serge Laplante recevait la décoration Léon Provancher, catégorie amateur.

Le prochain congrès se tiendra pour la première fois de façon conjointe avec la Société de Protection des Plantes du Québec (SPPQ), à St-Georges de Beauce, les 13 et 14 octobre 1993 et aura pour thème "Société et Environnement: les enjeux de la protection des ressources". Une quarantaine de communications et affiches scientifiques y seront également présentées.

*La Revue d'Entomologie du Québec* publiera ses derniers numéros cette année et cessera d'exister à partir de ce moment, une résolution en ce sens ayant été adoptée par les membres de la SEQ. Le manque d'articles soumis à la revue et la compétition importante de revues internationales spécialisées sont à la base de cette décision. *Le Bulletin de la SEQ* demeure cependant et sera amélioré afin de combler le vide laissé par la disparition de la revue.

La filiale de Montréal de la SEQ a été particulièrement active au cours de l'année passée avec plusieurs réunions ayant permis de présenter des travaux d'entomologistes de la région et d'avoir accès aux installations de l'Insectarium de Montréal et du Biodôme de Montréal. L'association des entomologistes amateurs du Québec (AEAQ) a également été mise en évidence avec un congrès tenu le 19 septembre ayant pour thème "Les trucs du métier" ainsi que des réunions tenues chaque mois.

Nous avons appris avec tristesse le décès de l'un de nos membres fondateurs de la SEQ et fellow de la SEC, le Dr Lucien Auclair, professeur retraité de l'Université de Montréal.

Daniel Coderre  
Représentant de la SEQ à la SEC

### Annual Report of the Acadian Entomological Society

The 53rd Annual Meeting of the Acadian Entomological Society was held on 21-23 July 1993 at Charlottetown, P.E.I. The symposium theme was "Insect Behavior" with invited speakers Ron Aiken, Randy Alford, Dan McCorquodale, Yvan Pelletier, and Dan Quiring. The meeting included a gathering at the Charlottetown Driving Park (harness racing) for the running of the "Acadian Entomological Society Pace". The 1994 and 1995 meetings will be held in Maine. The newly elected AES executive are:

President	Elizabeth Gibbs, University of Maine
Vice-president	Eleanor Groden, University of Maine
Secretary-Treasurer	Frank Drummond, University of Maine
Past President	Jeff Stewart, Ag. Canada, Charlottetown

Rob Smith, Agriculture Canada at Kentville, received a favorable response from Nova Scotia entomologists regarding the intention of the AES Nova Scotia contingent to host the 1996 Annual Meeting of the Entomological Society of Canada in Halifax. An official offer will be made at the 1993 ESC Annual Meeting.

The society received \$200.00 from the ESC Public Education Committee and has since requested additional funds. The money will go towards entomology teaching kits for schools and the Newfoundland Insectarium. Several AES members are actively promoting entomology in schools as part of the "Innovators in Schools" program.

Jon Sweeney  
AES Regional Director to the ESC

## MINUTES

### Governing Board Meeting Water Tower Inn Sault Ste. Marie, Ontario September 25, 1993

The meeting was called to order at 0905 hours on September 25, 1993 by President P.W. Riegert. Those present were P.W. Riegert, President; G.H. Gerber, First-Vice President; L. Safrayik, Second Vice-President; R. Ring, Past President; G. Boivin, S.A. Marshall, J. Turgeon, S. Smith and H. Danks, Directors-at-Large; T. Shore, (ESBC), B.K. Mitchell (ESA), J. Soroka (ESS), P. Fields (ESM), R.S. MacDonald (ES0), and J. Sweeney (AES), Directors from Affiliated Societies; R.G. Footitt, Treasurer; A.B. Ewen, Scientific Editor- *The Canadian Entomologist*; F.F. Hunter, *Bulletin* Editor; R.J. West, Secretary; K. MacKenzie, Student Affairs Committee; and P. Kevan from the Publications Committee. J.N. McNeil presented a report on behalf of the CFBS.

1. Notice of Meeting

Notice of this meeting was mailed on August 10, 1993. Notices were published in the March and June, 1993 issues of the *Bulletin* (Vol. 25).

2. Absences and Proxies

K. W. Richards, V. Behan-Pelletier (Editor, *Memoirs*) and D. Coderre were absent. G. Boivin was proxy for D. Coderre.

3. Additions to and approval of the Agenda

Add Item 9.2.4.1.2 Replacement and Remuneration for Scientific Editors.

Add Item 9.2.10.6 Joint Meeting with the Entomological Society of America

Add Item 9.2.22.1 Manpower Study.

The agenda was accepted following a motion by G.H. Gerber and seconded by L. Safranyik.

Carried

No action required

4. Minutes - Governing Board Meeting, Sept 26/92

Minutes of the September 26/92 meeting of the Governing Board were circulated to the Board on October 26, 1992 and published in the December 1992 *Bulletin*.

J. Soroka moved and J. Sweeney seconded that the minutes be accepted.

Carried

No action required

5. Minutes - 42nd Annual General Meeting, Sept 29/92

Minutes of the 42nd Annual General Meeting on September 29/92 were circulated to the Board on October 26, 1992 and published in the December 1992 *Bulletin*.

The minutes will be presented for approval at the Annual General Meeting.

No action required

6. Minutes - Governing Board Meeting, Sept 30/92

Minutes of the Governing Board Meeting on September 30/92 were circulated to the Board on October 26, 1992 and published in the December 1992 *Bulletin*.

B.K. Mitchell moved and G.H. Gerber seconded that the minutes be accepted.

Carried

No action required

7. Minutes - Executive Council Meeting, April 21, 1993  
The minutes were circulated to the Board on May 1, 1993.
8. Business arising from the previous minutes  
The following items arising from the previous minutes were identified and moved for discussion under New Business.
  - 8.1 Job Description for Managing Editor (Item 9.2.4.1.1, Executive Council Meeting, April 21, 1993). Moved to Item 9.2.4.1.1.
  - 8.2 Advertisement Charges for Job Placements (Item 9.2.5, Executive Council Meeting, April 21, 1993). Moved to Item 9.2.5.1.
  - 8.3 New Printer for Bulletin (Item 9.2.5.1, Governing Board Meeting, September 26, 1992). Moved to Item 9.2.5.2.
  - 8.4 Nominations for Gold Medal Award (Item 9.2.9, Executive Council Meeting, April 21, 1993). Moved to Item 9.2.9.1).
  - 8.5 Clarification of Membership Entitlements (Item 9.2.16, Executive Council Meeting, April 21, 1993; Item 9.2.8, Governing Board Meeting, September 26, 1992). Moved to Item 9.2.16.1.
  - 8.6 Page Charges to Memoirs and The Canadian Entomologist (Item 9.2.4.2.1, Governing Board Meeting, September 26, 1992). Moved to Item 9.2.18.1.
  - 8.7 Design and Printing of The Canadian Entomologist (Item 9.2.18.2, Executive Council Meeting, April 21, 1993; Item 9.2.4.1.2, Governing Board Meeting, September 26, 1992). Moved to Item 9.2.18.2.
9. New Business
  - 9.1 Correspondence  
R. West introduced items of correspondence which required no formal action.
    - 9.1.1 Deaths  
Notice was given of the deaths of John Arnold, Howard Trueman, Murray Maw, Dick Handford, Carl Atwood, Ed Reeks, Bill Putman, Lucien Auclair, Harold Goble, Jean Manson, Jean Brown, Grace Brown, Jane Angus, Fernand Godbout, Grant Robinson, Dave Turnball, Tim Spanton and Vincent Dethier.
  - 9.2 Reports from Officers, Trustees, Committees and Representatives  
G.H. Gerber moved and H.V. Danks seconded that all reports be received.  
Carried No action required
    - 9.2.1 Executive Council  
The Executive Council's report will be presented at the Annual Meeting. Updates by the President were published in the December 1992 and June 1993 issues of the *Bulletin*.
    - 9.2.2 Treasurer  
The Society finished the year 1992 with a financial deficit, mainly due to publication costs. The deficit in 1993 will be large. Money has not been invested for four years because of high operating

costs. The Scholarship Fund continues to grow. The Treasurer continues to be frustrated on the lack of a clear indication of what expenses and revenues from the book on diseases and pests of vegetable crops in Canada (DPVCC) will be. R.G. Footit thanked Sandy Devine and Gary Gibson for their help in 1992/93 and expressed his appreciation to the many ESC members who carry out Society business and keep costs to a minimum.

#### 9.2.2.1 Auditor's Report

The Auditors recommended that the Secretary and a Director of the Society add their signatures to those of the President and First Vice-President to approved minutes. This recommendation has already been acted upon by the Secretary. The Auditor's Report for 1992, as published in the June 1993 *Bulletin*, will be presented at the Annual General Meeting for approval. A deficit of \$36,000 for 1993 is mainly due to increased costs of producing the Society's publications.

Action: Treasurer

#### 9.2.2.2 ESC Headquarter's Committee

The report of the Committee was presented by B. Footit. House repairs in 1993 cost \$1750.00, less than the \$3000 budgeted. The basement floor is a bit damp and rotten in a few places. Free storage for back issues of *The Canadian Entomologist* may not continue to be provided by Agriculture Canada. Upgrading of the basement will be necessary if publications are to be stored there. \$2000 has been allocated in the 1994 budget for Headquarter's repairs.

#### 9.2.3 Finance Committee

The Committee report was presented by R.G. Footit. Items brought to the attention by the Treasurer included the costs of withdrawal from the CFBS and the potential need to remunerate the Editor of *The Canadian Entomologist* \$10,000 per year beginning in 1994. Recommendations by the Committee concerning editorship, publications, DPVCC book and the CFBS are dealt with in the reports by these committees.

The Finance Committee recommended, as it did in 1990, that Directors from the Affiliated Societies and Directors-at-Large no longer be subsidized to attend the Annual Meeting because of the large deficits incurred by the Society since 1991. R.G. Footit encouraged Directors and Trustees to keep costs down. However, subsidization of airfare will continue to ensure a quorum at meetings of the Board.

The Finance Committee was concerned that it has not received sufficient information throughout the year from other committees and the Executive Council to fulfill its mandate in a timely manner. Committee Chairs are therefore encouraged to promptly inform the Finance Committee of actions affecting Societal finances. Financial implications of Board decisions need to be reviewed with the Committee beforehand. The incoming President will monitor the progress of Committees closely during his term in 1993-94.

Action: G.H. Gerber

#### 9.2.4 Scientific Editors

##### 9.2.4.1 Editor - *The Canadian Entomologist*

A. Ewen presented an account of office expenses and the number of manuscripts received, accepted, rejected and withdrawn. Higher costs were incurred because of a very high number of manuscripts submitted. Despite the high number of manuscripts received, A. Ewen felt that *The Canadian Entomologist* should be attracting more submissions from agriculture and

forestry. Dr. J. Régnière has resigned and Dr. R. Fleming will now handle all manuscripts on population modelling. One C.P. Alexander paper was published in the first issue of 1993 and two more are in preparation but will not be published until the end of the year. A. Ewen recommended that the Treasurer discuss the financial status of the C.P. Alexander Fund periodically with the Scientific Editor.

Action: R.G. Footitt

A. Ewen felt that decisions of manuscripts, including commemorative issues, should rest with the editors and reviewers, and not the Board. A policy on publishing symposia in *The Canadian Entomologist* will be printed along with other Instructions to Authors as follows, "The Society may publish Festschriften, proceedings from Society Symposia, commemorative issues, and so on, but only as part of the Memoir series (no. 3. addition to "Instructions to Authors").

Action: A. Ewen

In response to a request by A. Ewen, agreed upon by the Chair of the Publications Committee, the following additions to Instructions to Authors will be made as of 1 January 1994,

1) add: "Use the Torre-Bueno Glossary of Entomology (1989 or later) as a reference for definitions of entomological terms."

2) add: "Only members of the Society may apply for waiver of page charges."

Carried

Action: A. Ewen

#### 9.2.4.1.1 Job Description for Managing Editor

The job description for the Managing Editor was circulated. H.V. Danks moved and L. Safranyik seconded that the job description be accepted.

Carried

No action required

#### 9.2.4.1.2 Replacement and Remuneration for Scientific Editors

A. Ewen intends to resign as of March 31, 1994 as Editor of *The Canadian Entomologist* if the position is to continue on a volunteer basis. He strongly recommended that the new Editor be either appointed or hired on contract for at least 3 years to maintain continuity. He would consider continuing as Editor under a contractual basis. The job, as pointed out by the last editor, Dr. Doug Eidt, and by Dr. Ewen, is too much to expect of volunteer help. The two Assistant Editors, C.H. Craig and R.H. Elliot, asked to resign their appointments effective as of September 25, 1993.

G.H. Gerber moved and B.K. Mitchell seconded that H.V. Danks be appointed to chair a search committee, including the Chair of the Publications Committee as a member, to define the role of the Scientific Editor and search for a replacement, providing a report and, if necessary a contingency plan, to the Governing Board by 1 January 1994.

Carried

Action: H.V. Danks

The Finance Committee recommended that remuneration for the Scientific Editor of *The Canadian Entomologist* not be increased without exploring other options, including a search for another editor, and without equal sources of increased revenue or decreased expenditures being designated to cover the expenses. If a remuneration of \$10,000 were to be covered by increased page charges, for example, then this would require approval of a page charge increase from \$25 to \$40 rather than to \$30. S.A. Marshall suggested that the honorarium for the Scientific Editor be increased. The possibility for an increase to the Scientific Editor's honorarium will be reviewed in the report by H.V. Danks.

**9.2.4.2 Editor - *Memoirs***

Only two manuscripts were submitted for review with one in press and the other completing review. Four *Memoirs* will appear in 1993. As little work was required of the Editor of the *Memoirs*, V. Behan-Pelletier requested in a letter to R.J. West that her honorarium for 1993 be withheld. This offer was gratefully accepted by the Board. R.J. West will write a letter of thanks to V. Behan-Pelletier.

Carried

Action: R.J. West

**9.2.5 Editor - *Bulletin***

F.F. Hunter summarized the type and number of submissions to the *Bulletin* in 1993. She was grateful to those who submitted material on disks. A schedule for submitting articles to the *Bulletin* was circulated and Board Members, Committee Chairs and Trustees were asked to submit shortened reports, either by e-mail or on disk, by November 1 for the December *Bulletin*.

A glossy insert to promote the DPVCC book will cost extra. P. Fields moved and R. Ring seconded that a colour glossy insert to advertise the DPVCC book be charged back to the ESC and CPS and that a black and white advertisement be placed in the *Bulletin* as a regular printed page without charge.

Carried

Action: F.F. Hunter

**9.2.5.1 Advertisement Charges for Job Placements**

R. Ring moved and L. Safranyik seconded that there be a policy of not charging for notices of job placements in the *Bulletin*.

Carried

Action: F.F. Hunter

**9.2.5.2 New Printer for *Bulletin***

F.F. Hunter is switching to Lowe-Martin (previously called Runge Press) as of January 1994. Costs will be cheaper than with the present printer.

Action: F.F. Hunter

**9.2.6 Nominating Committee**

The Nominating Committee's report was published in the March 1993 *Bulletin* and circulated to the Board in May. No additional nominations to those printed in the March *Bulletin* were received by the Secretary by the April 30th deadline.

No action required

There was no nomination for a representative for a person to stand for election to the CFBS Board of Directors.

**9.2.7 Elections Committee**

The Committee Report was published in the September 1993 *Bulletin*. The following were elected to office: Guy Boivin, Second Vice-President; Cedric Gillott and Howard Thistlewood, Directors-at-Large; Peter Harris and Geoff Scudder, Fellowship Selection Committee. The membership voted strongly (80:20) in favour of leaving the CFBS and continuing to hold the Annual Meeting in the fall.

J. Sweeney moved and G.H. Gerber seconded that the 1993 ballots be destroyed.

Carried

Action: T. Galloway

**9.2.8 Fellowships Committee**

The Committee's recommendation to recognize Ms. Thelma Finlayson as the Fellow for 1993 was ratified by the Board in April.

#### 9.2.9 Achievement Awards Committee

Dr. Sandy Smith was acknowledged as the recipient of the C. Gordon Hewitt Award. The Governing Board extended congratulations to Dr. Smith. There was no Gold Medal Award winner for 1993.

L. Safranyik moved and G.H. Gerber seconded that Section 2, Duties, of the Committee Guidelines be amended to enforce a deadline of 31 December for nominations. This change will be in place for nominations for the 1994 awards.

Carried

Action: D. Quiring

L. Safranyik moved and H.V. Danks seconded that Section 3, Duties, of the Committee Guidelines be amended to read, "Upon appointment, the Chair writes the Secretaries of the Affiliates, to invite the Affiliates to submit nominations for each Award."

Carried

Action: D. Quiring

L. Safranyik moved and G.H. Gerber seconded that the following amendment to Rule c.2 of the Committee Guidelines be amended to read:

"The Awards Committee shall make no nominations of its own, and with the agreement of the nominator shall consider nominees for 3 consecutive years."

Carried

Action: D. Quiring

The Committee Chair was encouraged to place a notice soliciting nominations for the Gold Medal and C. Gordon Hewitt Award with the annual mailing notifying Members of dues renewals.

Action: L. Safranyik, R. Footitt

#### 9.2.9.1 Nominations for Gold Medal Award

Actions to ensure continued nominations for the Gold Medal Award were taken as indicated above.

#### 9.2.10 Annual Meeting Committee

##### 9.2.10.1 Annual Meeting 1993 - Sault Ste. Marie

J. Turgeon estimated a balanced budget based on an attendance of 200 persons. Strong support was received from the private sector and the Canadian Forest Service. About 120 contributions to symposia, oral presentations and posters were received. A colouring bee and insect-eating events are scheduled to attract members of the general public. Jeremy McNeil talked to about 600 students from schools in Sault Ste. Marie. Yves Prévost will present a lecture entitled, "Insects on your fork". Local media attention is good. Signed prints of the 1993 Meeting logo will be sold for \$90. The Board thanked Jean for his efforts in organizing the meeting.

##### 9.2.10.2 Annual Meeting 1994 - Winnipeg

The 1994 Joint Annual Meeting of the ESC-ESM will be held at the Delta Winnipeg Hotel in downtown Winnipeg from October 15th to 19th. The theme of the meeting will be 'Insect Movement'. Symposia will include 'Insect-Host Interactions and Pest Management' and 'Different Approaches to Forest and Urban Forest Pest Management'. Workshops on 'biodiversity' and 'getting through graduate school' are planned. An income of \$24,000 and expenses of \$21,675 are expected.

##### 9.2.10.5 Annual Meeting 1995 - Victoria

The 1995 Annual Meeting will be held in October at the Victoria Conference Centre. A variety of hotels have been contacted.

9.2.10.5 Annual Meeting 1996 - Maritimes

On behalf of the Acadian Entomological Society, J. Sweeney extended an invitation to the Society to hold the 1996 Annual Meeting in Halifax, Nova Scotia.

G.H. Gerber moved and T. Shore seconded that the invitation to hold the 1996 Annual Meeting jointly with the Acadian Entomological Society be accepted.

Carried

Action: J. Sweeney

9.2.10.6 Joint Meeting with the Entomological Society of America

In response to a letter from the Entomological Society of America, the Board was in favour of having a joint meeting with the ESA at the end of the decade in either Montreal or Toronto or wherever adequate accommodations can be found. G.H. Gerber will indicate to the ESA that the ESC is interested and will explore this further with the Quebec and Ontario societies and the ESA. The conference program would be organized by the ESA, but local arrangements would be left to Canadians.

Action: G.H. Gerber

9.2.11 Bilingualism Committee

The ESC Standing Rules and Bylaws were translated in 1993 at a cost of \$1500. Additional translation costs were \$125. A budget of \$1500 is expected to cover costs for 1994, provided that the volume of work needed for translation is less than 1993. Sufficient lead time to translate documents is requested.

No action required

9.2.12 Bylaws, Rules and Regulations Committee

Changes were made to the Standing Rules approved at the last Annual Meeting and to Committee Guidelines at the September 26/92 Board Meeting.

9.2.12.1 Rule Changes Clarifying Membership Entitlements

G.H. Gerber moved and B.K. Mitchell seconded that the following changes to the Standing Rules proposed by the Bylaws, Rules and Regulations Committee to clarify Membership entitlements be approved:

I.1 Student Member

(c) Student Members shall receive the *Bulletin* of the Entomological Society of Canada as part of the Annual Dues.

I.2 Fellow

(f) Fellows shall receive *The Canadian Entomologist* and the *Bulletin* of the Entomological Society of Canada if they remain as Active Members of the Society.

I.3 Honorary Member

(c) Honorary Members, who are not Active Members, shall upon request receive the *Bulletin* of the Entomological Society of Canada for twenty (\$20.00).

I.5 Regular Member

(a) Regular Members shall receive *The Canadian Entomologist* and the *Bulletin* of the Entomological Society of Canada as part of the Annual Dues.

Carried

Action: D. Quiring

9.2.12.2 Guidelines and Rules for Keith Kevan Scholarship

The Committee reviewed the temporary Committee Guidelines and Standing Rules, necessitated by the creation of the Keith Kevan Scholarship, that the Board approved by mailed ballot in

January 1993. Only editorial changes were made to the approved Guidelines and Standing Rules.

G.H. Gerber moved and P. Fields seconded that the proposed revision to the Committee Guidelines for the Scholarship Committee, accommodating the Keith Kevan Award and printed in the 1993 annual report of the Bylaws, Rules and Regulations Committee be approved.

Carried

Action: D. Quiring

P. Fields moved and J. Turgeon seconded that the proposed revision to Standing Rule 4 (k) (Scholarship Committee), accommodating the Keith Kevan Award and printed in the 1993 annual report of the Bylaws, Rules and Regulations Committee be approved:

Carried

Action: D. Quiring

R. Ring moved and J. Turgeon seconded that the language in the Committee Guidelines, Standing Rules and Bylaws be amended to be gender-neutral.

Carried

Action: D. Quiring

#### 9.2.13 Endangered Species Committee

No report. Ted Pike resigned as Chair. S.A. Marshall will be the next Chair.

No action required

#### 9.2.14 Heritage Committee

Summary listings of the time and place of annual meetings, and officers and executive members, of the Society and Affiliated Societies have been initiated. P.W. Riegert indicated that he will resign as Chair as of the 1994 Annual Meeting.

No action required

#### 9.2.15 Insect Common Names Committee

The list of common names has been transferred to disk. The rewritten introduction to the list and acknowledgements were circulated to the Board. The Chair of the Publications Committee was sent a modified proposal form, a registration form along with instructions on how to use the disk.

The Board directed the Publications Committee to develop with the Marketing Committee the preferred format, duplication, distribution, pricing and marketing of the disk.

Action: H.V. Danks

The Board noted that the Insect Common Names Committee deserves special thanks and this will be done in a letter from the President to E. Belton and D. Eidt.

Action: P.W. Riegert

#### 9.2.16 Membership Committee

Membership rose in 1993 by 24 members. 39 Students joined the Society in 1993. Two vacancies remain for Honorary Membership. J. Soroka suggested that application forms for ESC Membership be made available at annual meetings of the Affiliated Societies.

##### 9.2.16.1 Clarification of Membership Entitlements

Following consultation with the Fellowships and Bylaws, Standing Rules and Regulations Committees, a review of membership entitlements was sent to the Executive Council in March. Recommendations for changes to Standing Rules and Committee Guidelines were dealt with above (see Item 9.2.12.1).

No action required

9.2.17 Public Education Committee

The Acadian Entomological Society requested and received \$600 to support teaching entomology in schools and at the Newfoundland Insectarium. No other Affiliated Society applied for funding in 1993. Affiliated Societies are eligible to apply for an annual grant of \$200 for public education. Funds may be accumulated up to a maximum of three years (\$600). A request for funds from the SEQ will be followed up.

Action: Public Education Committee

9.2.18 Publications Committee

Twenty-nine book reviews and 11 book notices were published in the *Bulletin*. L. Dosdall is resigning as Chair of the Publications Committee.

9.2.18.1 Page Charges to *Memoirs* and *The Canadian Entomologist*

The Publications Committee agreed with the Finance Committee's proposal that page and reprint charges for *The Canadian Entomologist* and the *Memoirs* be increased. The Publications Committee recommends a two-tiered price for the *Memoirs* where charges of \$45 per page would apply to *Memoirs* of 100 or more printed pages and higher fees (eg., \$75 per page) for *Memoirs* under 100 printed pages. A rate of \$45/page was approved by the Board by mailed ballot.

9.2.18.2 Design and Printing of *The Canadian Entomologist*

Five recommendations to change the design, format and publication method of the Society's journals were forwarded to the Executive Council. Following a discussion with a representative from Runge Press, the Executive Council disagreed with 4 of the Publications Committee recommendations and felt that the current page size and quality should not be altered, that *The Canadian Entomologist* should continue to be published every two months and that Runge Press should continue as the Society's Printer because of their past service and proximity to the Managing Editor's office and because there would be no cost savings. P.G. Kevan (Editor, *Proceedings of the Entomological Society of Ontario*), in an independent review of these recommendations, came to the same conclusions as the Executive Council.

Further to the Publication Committee's fifth recommendation, G.H. Gerber moved and L. Safranyik seconded that a general policy of requiring the submission of manuscripts in a prescribed format on electronic disk and on a hard (paper) copy be adopted.

Carried

Action: Publications Committee, Scientific Editors

The Board directed that a request to submit paper and electronic (disk) copies of manuscripts be listed in "Instructions to Authors".

Action: A. Ewen

The Publications Committee also recommended contracting the services of Mr. Paul-Michel Brunelle, an ESC member and a professional design consultant who was willing to co-ordinate the redesigning of *Can. Ent.*, the *Bulletin* and the *Memoirs* at 1/3 the normal rate. Subsequent to reading the President's update in the June *Bulletin*, where a choice to format and design Society publications without the services of a consultant was indicated, Mr. Brunelle withdrew his offer.

J. Sweeney moved and S.A. Marshall seconded that a letter regretting the misunderstanding created by the President's update published in the June *Bulletin* be written by the President and sent to Mr. Brunelle along with thanks from the Board for his proposal to redesign the covers of Societal publications.

Carried

Action: G.H. Gerber

An *in house* attempt to develop designs for the covers of Societal publications has begun. A disk containing images developed by P.W. Riegert and L. Dosdall will be passed on to the new Chair. Hard copies of some designs were shown to the Board. A re-drawn ESC logo was prepared by a professional artist in Calgary and made available to the Publications Committee free of charge.

Action: Publications Committee

#### 9.2.19 Scholarships Committee

The 1993 Scholarship Award Winners are Mr. Scott Digweed (University of Alberta) and Mr. Daniel Doucet (Université Laval).

No action required

#### 9.2.19.1 Keith Kevan Scholarship

The Keith Kevan Award Winner for 1993, the inaugural year for this award, is Ms. Wanda Kuperus. P.G. Kevan will present the award.

No action required

Recommendations for changes to Standing Rules and Committee Guidelines to accommodate the Kevan Award were dealt with above (see Item 9.2.12.2).

#### 9.2.20 Research-Travel Grants

A Travel Grant for 1993 was awarded to Mr. R.A. Cannings (University of Guelph) and this information was printed in the June 1993 Bulletin.

No action required

#### 9.2.21 Science Policy Committee

The Committee Chair, G.H. Gerber, stated that the Society can no longer rely on the CFBS to address science policies affecting entomology and asked the Board for some direction on issues and projects that the Committee can assume during the next few years. Concerns raised were difficulties in funding entomological research by federal government departments, and opening up the Canadian - U.S. border to honeybee importations.

#### 9.2.21.1 Systematics Enhancement Committee

A report was circulated to the Board in May 1993 following the Executive Council Meeting. S.A. Marshall moved and G. Boivin seconded that a societal working group be formed with sister societies to support broad-based promotion of systematics.

Carried

Action: S.A. Marshall, G.H. Gerber

#### 9.2.21.2 Committee on Biological Control Regulations

The Committee has been active in the preparation of guidelines for regulation of biological control agents and is waiting to see the draft prepared by the Plant Industry Division, Agriculture Canada. When concrete regulations are drafted and available for public scrutiny, these will be circulated to ESC Members for their comments. Apparently portions of the final draft are considerably different to the working draft. Of great concern to the Committee, was a proposed guideline that all inundative releases, irrespective of research or commercial status and scale, would require regulatory permit. Core Managers of the new regulatory system met on September 15 to discuss the final draft. The guideline on inundative releases was amended to allow small field releases under 10 ha in size without the need for a regulatory permit. Biocontrol News published the text of the Biocontrol Forum held at the 1992 Annual ESC Meeting. The Ad hoc Committee having done its work will disband.

No action required

9.2.22 Student Affairs Committee

The agenda for a "Grant-Writing" Workshop, organized for this year's 1993 Annual Meeting was circulated. The Student Affairs Committee would like to become involved with the Membership Committee to increase Student Membership and the Scholarships Committee to influence the number and types of awards available to students.

K. MacKenzie is resigning as Chair and Ms. Elizabeth Tomlin, a current member of the Committee, has offered to take over as Chair.

Action: G.H. Gerber

9.2.22.1 Manpower Survey

A Manpower Study has not been conducted since 1984 and is recommended for 1994. Government reductions and the nature of jobs that are available make the value of a manpower survey for entomologists *per se* of limited value.

The Board requests the Committee to provide more information on how the survey would be conducted, who would do it, how the results will be used, the expected value of the survey, and how much the survey will cost the Society.

Action: E. Tomlin

9.2.23 Marketing Committee

The Committee recommends that a one-page ad advertising our journal be placed in the Cooperative Subscription Catalogue (a compilation of all journal titles) at a cost of \$450 (U.S.). G. Boivin suggested that the preparation of a flyer might be more profitable. R.G. Footitt endorsed the Marketing Committee's recommendation to determine if continuing the ad on an annual basis would be worthwhile.

G. Boivin moved and S. Smith seconded that an advertisement for The Canadian Entomologist be placed in the Cooperative Subscription Catalogue for one year.

Carried

Action: H.V. Danks and R.G. Footitt

As the Chair was away on sabbatical from January to August 1993, the Board recommended that the Marketing Committee continue on an ad hoc basis for another year.

9.2.24 Diseases and Pests of Vegetable Crops in Canada

John Garland expects that the English version will be printed by the end of November and the French version by the end of January. The Finance Committee questions whether the impact of reducing the size of the publication run of the book, Diseases and Insect Pests of Vegetable Crops, by two thirds to 4,000 English and 1,500 French copies was studied and if the Executive Council approved this reduction. The Executive Council approved this reduction in April 1993. The Chair of the Publications Committee will consult with the Marketing Committee, Treasurer, and John Garland to contact representatives from the CPS to clarify marketing, the pricing and distribution of the book. Following these consultations, G.H. Gerber will ensure that the Board receives appropriate updates on the status of the book.

Action: G.H. Gerber (H.V. Danks, J.D. Shorthouse,  
R.G. Footitt, J. Garland)

## **Canadian Federation of Biological Societies**

### **9.2.25      Report from the CFBS**

J.N. McNeil summarized the actions of the CFBS in 1993. With the withdrawal of the Society as a CFBS member, Society members are encouraged to join the Canadian Society for Life Sciences to improve the scientific/educational environment in Canada. This will be publicized in the Bulletin. Dr. McNeil regretted the lack of participation in CFBS activities by the ESC during the past two years. He presented his view on the present status of science in Canada: although basic science will remain, strings will be attached. "Relevant science", the kind that gives a (immediate?) return on investments, is more likely to be funded. Biological sciences including entomology are under threat. The CFBS will be meeting next week to fight a proposal in British Columbia to restrict environmental consulting to engineers. The Network of Centres of Excellence program may have been protected by letters from the CFBS.

#### **9.2.25.1      Vote to Continue ESC Affiliation with CFBS**

J.N. McNeil felt that the vote to continue ESC affiliation with the CFBS was handled badly and should have been in the form of a clear recommendation from the Board to (or not to) continue the affiliation. Under the terms of the CFBS Bylaws, a member society that wishes to opt out must give one year's notice in the form of a certified copy of a resolution by the Society's Governing Council (Board of Directors or Council). This implies that the Society must pay dues to the CFBS until January 1995. Two other member societies gave notice in 1993 of their intention to withdraw from the CFBS but will be paying dues for 1994. J.N. McNeil stated that non-payment of 1994 by the ESC would move the CFBS towards bankruptcy.

A chronological summary of the CFBS - ESC association was appended to the report by the Finance Committee. The Finance Committee recommended that legal advice be sought by the President concerning financial obligations to the CFBS, and if payment to the CFBS is indicated, then CFBS membership dues for 1994 should come from the Society not from individual memberships. However, if this action is taken, the 1994 dues notice to members should include a letter from the President explaining the obligations of the Society to the CFBS and requesting a voluntary payment of CFBS dues.

L. Safranyik moved and G.H. Gerber seconded that the 1994 CFBS dues be taken out of general revenue and be included as an item in the 1994 Budget.

Carried

Action: R.G. Footitt

Further to a recommendation from the Finance Committee and at the suggestion of K. MacKenzie, the Board requested that a carefully-worded letter asking Members to voluntarily pay CFBS dues be sent out with the annual notice to renew Memberships.

Action: G.H. Gerber

## **Affiliated Societies**

### **9.2.26      Regional Reports**

Reports from the Directors of all the Affiliated Societies were received. Presentations were made by:

T. Shore (ESBC), B.K. Mitchell (ESA), J. Soroka (ESS), P.Fields (ESM), S. MacDonald (ESO), G. Boivin (SEQ) and J. Sweeney (AES).

- 9.2.26.1 Entomological Society of B.C.
- 9.2.26.2 Entomological Society of Alberta
- 9.2.26.3 Entomological Society of Saskatchewan
- 9.2.26.4 Entomological Society of Manitoba
- 9.2.26.5 Entomological Society of Ontario
- 9.2.26.6 Société d'Entomologie du Québec
- 9.2.26.7 Acadian Entomological Society

All of the Affiliated Societies held successful annual meetings and actively promoted entomology in schools and with the general public. The ENTOMOL electronic network has about 400 subscribers worldwide.

9.3 Other Business

There was no other business.

10. Next Meeting

The next meeting of the Governing Board will be held at 1200 h at the Water Tower Inn, Sault Ste. Marie on September 29, 1993.

11. Adjournment

President Riegert adjourned the meeting at 1823 hours.

**43rd Annual General Meeting  
Water Tower Inn  
Sault Ste. Marie, Ontario  
September 28, 1993**

President P.W. Riegert called the Meeting to order at 1635 hours. 51 members were present.

1. Notice of Meeting

Notices of the meeting were published in the March and June 1993 issues of the Bulletin (Vol. 25).

2. Proxies

There were no proxies.

3. Additions to the Agenda and Approval of the Agenda

Add Item 7.1.4 Gender-neutral Wording of ESC Documents.

Add to Item 13 Handbook Series on the Insects and Arachnids of Canada - G.E. Ball  
K. MacKenzie moved and Guy Boivin seconded that the agenda be accepted.

Carried

No action required

4. Deceased Members of the Entomological Community

A moment of silence was observed in memory of the following members of the Entomological Community who passed away since the last annual meeting: John Arnold, Murray Maw, Dick Handford, Carl Atwood, Ed Reeks, Bill Putman, Lucien Auclair, Harold Goble, Fernand Godbout, Grant Robinson, Dave Turnball, Tim Spanton, Vince Dethier and John George.

5. Minutes of the 42nd Annual General Meeting

Minutes of the 42st Annual General Meeting were printed in the December 1992 issue of the *Bulletin* (Vol. 24).

H. Danks moved and P. Kevan seconded that the minutes be accepted.

Carried

No action required

6. Business Arising from the Minutes

There was no business arising from the previous minutes.

7. Report from Governing Board

President Riegert presented a report on behalf of the Governing Board. The report from the Governing Board and regular updates are published in the *Bulletin*.

E. Becker moved and J.N. McNeil seconded that the President's Report be accepted.

Carried

No action required

7.1 Changes to Standing Rules

7.1.1 Rule Changes Clarifying Membership Entitlements

D. Quiring moved and K. MacKenzie seconded that the following additions to Standing Rule I be amended to clarify membership entitlements:

I.1 (c): Student Members shall receive the *Bulletin* of the Entomological Society as part of the Annual Dues.

I.2 (f): Fellows shall receive *The Canadian Entomologist* and the *Bulletin* of the Entomological Society of Canada if they remain as Active Members of the Society.

I.3 (c): Honorary Members, who are not Active Members, shall upon request receive the *Bulletin* of the Entomological Society of Canada for twenty (\$20.00).

I.4 (a): Regular Members shall receive *The Canadian Entomologist* and the *Bulletin* of the Entomological Society of Canada as part of the Annual Dues.

Carried

Action: D. Quiring

7.1.2 Increases to Page Charges and Cost of Reprints

D. Quiring moved and A. Ewen seconded that the following changes to Standing Rule XII be made to set page charges and cost of reprints of Societal publications:

XII.5: The charge for publication in *The Canadian Entomologist* shall be thirty dollars (\$30.00) for each page, effective for all manuscripts received after 1 March 1993.

XII.6: The cost of reprints from *The Canadian Entomologist* and from the *Bulletin*, effective for manuscripts received after 1 March 1993, shall be increased by 10%.

XII.7: The charge for publication in the *Memoirs of the Entomological Society of Canada* shall be forty-five dollars (\$45.00) for each page published after 1 January 1994.

Carried

Action: D. Quiring

7.1.3 Keith Kevan Scholarship

D. Quiring moved and J.N. McNeil seconded that the following changes to Standing Rule 4 (k) be made:

Add, to first paragraph, "Also, three experts in systematics will serve on the Keith Kevan Scholarship subcommittee."

Add, to second paragraph, "and (3) Keith Kevan Scholarship, including the Chair and three experts in systematics. The Chairman may convene or appoint convenors for any subcommittee(s)."

The third paragraph shall read, "The Committee shall select the recipient of awards and scholarships, except for the Keith Kevan Scholarship which will be selected by the Keith Kevan Scholarship subcommittee, and shall undertake to raise funds to augment the Scholarship Fund."

Carried

Action: D. Quiring

#### 7.1.4 Gender-neutral Wording

D. Quiring moved and J. Spence seconded that the English wording used in the Standing Rules, Committee Guidelines and Bylaws of the Entomological Society of Canada be gender-neutral.

Carried

Action: D. Quiring

#### 7.2 Decision to Withdraw from the CFBS

President Riegert informed the membership that a member society of the CFBS that wishes to opt out must give one year's notice and pay dues for that year. Following the precedent set by two other societies who gave notice of leaving the CFBS and who will pay CFBS dues in 1994, and to fulfill obligations as a member of the CFBS, the Board authorized that CFBS dues for 1994 be paid from general revenues of the Society. In view of the Society's financial situation, President Riegert encouraged Members to voluntarily pay CFBS dues when they renew their memberships for 1994.

D. Eidt moved and J.N. McNeil seconded that the CFBS dues for 1994 be paid from general revenues of the Society.

Carried

Action: B. Foottit

#### 7.3 Update on DPVCC Book

J.D. Shorthouse, Chair of the Marketing Committee, presented an update on the status of the book on diseases and pests of vegetable crops in Canada. 4000 English copies and 1500 French copies will be printed and sold before other copies are produced. The book will cost about \$65-75. Lists and contacts of where the book can be marketed have been made. A display, shown at the Annual Meeting, will be shown at meetings across the country. Sales of slides will wait until the book is sold.

#### 8. Auditor's Report

R.G. Foottit presented the Auditor's Report for 1992 as published in the June 1993 issue of the Bulletin.

B. Foottit moved and G. Boivin seconded that the Auditor's report be accepted.

Carried

No action required

#### 9. Elections Committee Report

R. West read the Elections Committee report. Those elected were:

Second Vice-President:

Dr. Guy Boivin

Directors-at-Large:

Dr. Howard Thistlewood

Dr. Cedric Gillott

Fellowships Selection Committee:

Dr. Peter Harris

Dr. Geoff Scudder

The membership voted strongly in favour of leaving the CFBS and continuing to hold the Annual Meeting in the fall.

10. Installation of Officers

The President called on G. Gerber to escort G. Boivin, Second Vice-President to the dias. President Riegert turned the gavel over to G.H. Gerber as incoming President of the Entomological Society of Canada. The new President accepted the gavel and thanked the Members for the honour of being President.

11. Presentation of Service Award

President Gerber thanked P.W. Riegert, outgoing President for his service to the Society and presented him with a service award.

12. Appointment of Auditor

R.G. Footitt moved and P. Fields seconded that McCay, Duff, and Company be retained as Auditors for 1993.

Carried

Action: Treasurer

13. Resolutions

At the request of President G.H. Gerber, H.V. Danks presented the following resolutions on behalf of the Entomological Society of Canada:

Thanks to organizing committee

"Whereas the 1993 Joint Annual Meeting of the Entomological Society of Canada and the Entomological Society of Ontario have met at the Water Tower Inn in Sault Ste. Marie, Ontario, September 26-29, 1993; and

Whereas there has been a full and interesting meeting of lectures, symposia, and papers; and

Whereas the program has been planned with care and concern for those attending; and

Whereas there has been ample opportunity provided for social interaction, and visits to Sault Ste. Marie and vicinity;

Be it resolved that the Entomological Society of Canada and the Entomological Society of Ontario express their sincere thanks to the Organizing Committee for their hard work and skill in arranging a most worthwhile and entertaining program; and

Be it further resolved that the two Societies thank the Organizing Committee and meeting contributors for their generous assistance; and

Be it further resolved that the two Societies express their thanks to the Management and Staff of the Water Tower Inn for their courteous assistance during the Meeting."

H.V. Danks moved and J.D. Shorthouse seconded that the resolutions be accepted.

Carried

Action: Secretary

Handbook Series on the Insects and Arachnids of Canada

G.E. Ball made the following resolutions to support continuance of the series "Handbooks of the Insects and Arachnids of Canada":

Whereas knowledge of species is a prerequisite for dealing with current concerns with biodiversity and environmental disturbance; and

Whereas recognition of species is a prerequisite for protection of endangered species, an item of environmental concern; and

Whereas one of the more generally useful means of learning to recognize insect species is the series, "Handbooks of the Insects and Arachnids of Canada", published under the auspices of the

Biological Resources Division (BRD) of the Centre for Land and Biological Resources Research; and

Whereas because of recent administrative changes, the capability of BRD to publish the aforementioned series has been jeopardized;

Be it resolved that BRD be assured of the importance attached to the Handbook series by the Entomological Society of Canada; and accordingly

Be it further resolved that the Entomological Society of Canada urge BRD to press for the authority needed to assure continuance of the Handbook series and to take such action as required to increase the rate of publication of the issues.

G.E. Ball moved and S. Peck seconded that the resolutions be accepted.

Carried

Action: G.H. Gerber

14. New Business

There was no new business. In response to a question from D. Miller, J.N. McNeil stated that a new society to promote and lobby for research in the life sciences is in formation.

15. Notice of 44th Annual General Meeting

The 44th Annual General Meeting will be held at the Delta Winnipeg Hotel in Winnipeg, Manitoba on October 18, 1994. Further notices for the meeting will be made in the March and June issues of the *Bulletin* (Vol. 26).

Action: Secretary

16. Adjournment

President G.H. Gerber adjourned the 43rd Annual General Meeting at 1755 hours following a motion by E. Becker.

**Governing Board Meeting  
Water Tower Inn  
Sault Ste. Marie, Ontario  
September 29, 1993**

The meeting was called to order at 1225 hours on September 29, 1993 by President G.H. Gerber. Those present were G.H. Gerber, President; P.W. Riegert, Past-President; L. Safranyik, First Vice-President; G. Boivin, Second Vice-President; J. Turgeon, S. Smith, H. Danks, and Howard Thistlewood, Directors-at-Large; T. Shore (ESBC), J. Soroka (ESS), P. Fields (ESM), R.S. MacDonald (ESO), and J. Sweeney (AES), Directors from Affiliate Societies; E. Tomlin, Chair, Student Affairs Committee; R. West, Secretary; R.G. Footitt, Treasurer; P.G. Kevan, and F.F. Hunter, Editor-*Bulletin*.

1. Notice of Meeting

Notice of this meeting was mailed on August 10, 1993. Notices were published in the March and June, 1993 issues of the *Bulletin* (Vol. 25).

2. Absences and Proxies

2.1 Absences

C. Gillott, V. Behan-Pelletier, D. Coderre, A. Ewen, S.A. Marshall, and B.K. Mitchell.

2.2 Proxies

G. Boivin for D. Coderre.

3. Additions to Agenda and Approval to the Agenda

Add Item 7.1 Pollinator Green Paper

P. Riegert moved and L. Safranyik seconded that the Agenda as amended be accepted.

Carried

No action required

4. Minutes of Previous Governing Board Meeting

A draft of the Minutes of the Governing Board Meeting held on September 25, 1993 was circulated by the Secretary for review.

Carried

No action required

5. Business Arising from Previous Governing Board Meeting

5.1 Scientific Editor

H.V. Danks provided an update on the status of the search for a Scientific Editor. P.G. Kevan, an experienced editor familiar with electronic publishing, has volunteered for the position of Scientific Editor. A wider look at the roles and responsibility will be reviewed by P.G. Kevan and the Chair of the Publications Committee. H.V. Danks has volunteered to be the Chair of the Publications Committee for 1993-94.

H.V. Danks moved and T. Shore seconded that the Board confirm that the position of Scientific Editor continue to be a volunteer unpaid position, with only a modest "honorarium" for unaccountable expenses.

Carried

No action required

H.V. Danks moved and P. Fields seconded that the Board appoint P.G. Kevan as Scientific Editor of *The Canadian Entomologist*, effective 1 January 1994, allowing for a period of overlap with the current Editor, until 31 March 1994.

Carried

Action: G.H. Gerber

H.V. Danks moved and P. Riegert seconded that recognizing the valuable services over a long period provided to the Society by Al Ewen as Scientific Editor, the Board formally thanks Dr. Ewen for his considerable efforts in this capacity.

Carried

Action: G.H. Gerber

5.2 Honoraria

H.V. Danks moved and P. Fields seconded that the remuneration to Trustees, given in the form of honoraria, be reviewed by the Finance Committee.

Carried

Action: G. Gibson

6. New Business

6.1 Appointments

6.1.1. Executive Council

J. Soroka moved and J. Turgeon seconded that the Executive Council for 1993-94 be: G.H.

Gerber, President; P.W. Riegert, Past-President; L. Safranyik, First Vice-President; and G. Boivin, Second Vice-President.

Carried

No action required

6.1.2. Trustees

G. Boivin moved and J. Turgeon seconded that the Trustees for 1993-94 be: R.G. Footitt, Treasurer; A.B. Ewen, Scientific Editor (effective until 31 March 1994) P.G. Kevan, Scientific Editor (effective 1 January 1994); V. Behan-Pelletier, Scientific Editor (*Memoirs*); Assistant Scientific Editors (if necessary, as appointed by P.G. Kevan; F. Hunter, *Bulletin* Editor; and R.J. West, Secretary.

Carried

No action required

6.1.3. Committees and Representatives

G. Boivin moved and J. Soroka seconded that the Governing Board approve the list of Committees and Representatives as prepared by the President and further that the Governing Board accept the President's appointees to remaining positions to be filled. A list of Committee members for 1993-1994 was circulated.

Carried

Action: G.H. Gerber

The Secretary will send terms of reference to all new Committee Chairs.

Carried

Action: G.H. Gerber, R. West

6.2 Budget

P. Riegert moved and T. Shore seconded that the budget for 1994 as amended by the Treasurer be approved.

Carried

Action: Treasurer

7. Other Business

7.1 Pollinator Green Paper

A copy of a paper on the status and importance of pollinating insects in Canada, intended as a green paper insert in the bulletin, was prepared and is available for review from P.G. Kevan.

J. Soroka moved and G. Boivin seconded that an ad hoc committee on the status of pollinators in Canada be struck. The ad hoc committee will report to the Science Policy Committee.

Carried

Action: L. Safranyik

J. Soroka moved and L. Safranyik seconded that P.G. Kevan, K. MacKenzie, and Ken Richards be appointed to the ad hoc Committee on the Status of Pollinators in Canada. Additional committee members, if necessary, will be appointed by P.G. Kevan.

Carried

Action: G.H. Gerber, P.G. Kevan

8. Next Meeting

The next meeting of the Governing Board will be held on October 15, 1994 beginning at 0900 hours at the Delta Winnipeg Hotel, Winnipeg, Manitoba. If necessary the meeting will continue on October 16.

9. Adjournment

The meeting was adjourned by President G.H. Gerber at 1340 hours.

## PERSONALIA



### DR. SANDY M. SMITH

**Recipient of the Entomological Society of  
Canada**

### **C. GORDON HEWITT AWARD**

**for outstanding Achievement in Canadian  
Entomology**

President Paul Riegert (right) presenting Dr. Sandy Smith (left) with the C. Gordon Hewitt Award Plaque at the 43rd Annual Meeting of the Entomological Society of Canada September 27, 1993 in Sault Ste. Marie, Ontario

The recipient of the Entomological Society of Canada's C. Gordon Hewitt Award is Dr. Sandy M. Smith, Faculty of Forestry, University of Toronto, Ontario. This award is presented for outstanding achievement in entomology by an individual under 40 years of age.

Sandy's involvement in entomology began during her undergraduate years at the University of Guelph under the tutelage of such professors as D.H. Pengelly, S.E. Dixon, G.A. Surgeoner, C.R. Ellis and J.E. Laing. Her undergraduate thesis (B.Sc. Agr.) was completed in 1978, entitled "The effect of juvenile hormone on the development of male reproductive organs in *Apis mellifera* (L.) and *Periplaneta americana* (L.)". After a year as a research technician in medical/veterinary entomology, she continued in a M.Sc. program, graduating in 1981 with a background in economic entomology, specifically destructive insects on regrowth alfalfa. In 1981, Dr. Smith received an NSERC scholarship to continue her Ph.D. at the University of Toronto in forest entomology under the guidance of Dr. J.R. Carrow. She was awarded her degree in 1985 for research on the "Feasibility of using the egg parasitoid, *Trichogramma minutum* Riley for biological control of the spruce budworm". During her NSERC-sponsored Post-Doctoral Fellowship with Forestry Canada-Ontario Region, Sandy expanded her interests to include ecological interactions between different mortality factors of forest pest insects. In 1987, she was appointed as Assistant Professor of forest pest management at the Faculty of Forestry, University of Toronto.

Dr. Smith's program in biological control of forest insects is aimed at augmenting native natural enemies against native pests either through inundative release or the manipulation of forest stands. She is internationally recognized for her contributions to inundative parasitoid releases, receiving three invitations to speak at symposia in the XIV International Congress of Entomology in Beijing, China, and has recently been invited to submit an article to the *Annual Review of Entomology* on the topic of biological control using *Trichogramma*. Of particular significance is Sandy's ability to obtain continued funding (\$1.8 million over the past six years) and cooperation for biological control programs in forestry through NSERC, Forestry Canada, the Ontario Ministry of Natural Resources, as well as the pest control and forest industries. Based largely on this study, a multinational company (Ciba Inc.) has become involved with the mass production and release of *Trichogramma*, a first for the insect control industry. Studies are on-going in Dr. Smith's laboratory to take this technology to the field for operational use with

increased emphasis on parasitoid quality, release application, and the identification of new target species. Her primary interest in these studies is to determine the activity and behaviour of parasitoids released under forest conditions.

Dr. Smith's research involves large scale field studies and thus is often published in collaboration with other authors, although she remains the senior author on the majority of papers. She has published 24 papers in refereed journals as well as several book chapters and government publications. Throughout her career, Sandy has presented 14 invited papers, 9 seminars and 28 research papers, a significant number at international institutions. She currently serves as a member for the NSERC Strategic Grant Selection Panel and on the Biologics Caucus for the Canadian Pest Management Advisory Committee and the Ornamentals & Turf Sub-Committee of the Ontario Crop Protection Committee. Dr. Smith has served on the Executive Board of the Canadian Institute of Forestry (Southern Ontario Section) and is currently the Secretary of the Entomological Society of Ontario (since 1988), and a Director-at-Large for the Entomological Society of Canada as well as a member of the ESC's Publication Committee.

Dr. Smith views the training and education of both undergraduate and graduate students as an essential part of her role in entomology. Over the past five years, in addition to her responsibility for major teaching and course design in four courses, her laboratory has trained a number of research personnel including 5 post-doctoral fellows, 9 graduate students, 5 diploma students, 7 NSERC summer students, 4 full or part-time technicians, over 25 summer students, and 9 mentorship students (high school). She has sat on a number of supervisory committees as well as acting in consultation for members of the public and media regarding pest management and biological control. Two of her students have won "The President's Prize for Best Student Paper" award from the Entomological Society of Ontario. In 1989/90 and 1990/91, Sandy was presented with the "Award for Teaching Excellence" by the forestry undergraduate students, the first time a professor has won this award twice. She serves as the entomology examiner for the Ontario Professional Forester's Association, and a reviewer of several major entomological journals. Sandy was granted tenure in 1993 at the Associate Professor level based on her excellent record in research, teaching and service to her discipline.

Dr. Sandy M. Smith is a young entomologist of outstanding accomplishment, and is a most worthy recipient of the C. Gordon Hewitt Award.



## **WANDA KUPERUS**

**Recipient of the Entomological Society of  
Canada**

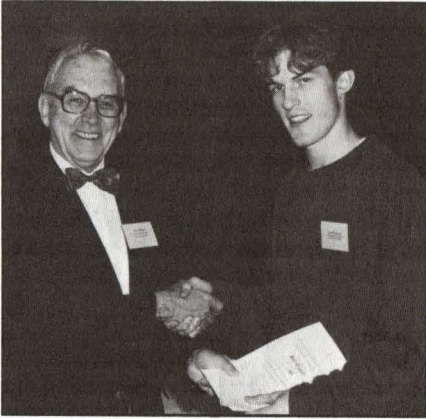
## **KEITH KEVAN SCHOLARSHIP**

Peter Kevan (left) presenting Wanda Kuperus (right) with the first Keith Kevan Scholarship Award at the 43rd Annual Meeting of the Entomological Society of Canada September 27, 1993 in Sault Ste. Marie, Ontario

**SCOTT DIGWEED**

**Recipient of an Entomological Society of  
Canada**

**POSTGRADUATE AWARD**



President Paul Riegert (left) presenting Scott Digweed (right) with a Postgraduate Award at the 43rd Annual Meeting of the Entomological Society of Canada September 27, 1993 in Sault Ste. Marie, Ontario

**Ron Stark - Recipient of *Founders Award***

Ron Stark, retired since 1984, received the *Founders Award* from the Western Forest Insect Work Conference last March. He was honoured for his work on the CANUSA program. The plaque was inscribed with the following: "Forged cooperative efforts between Canada and the U.S."

**IN MEMORY**

**Professor Carl E. Atwood Memorial Lecture Series**

Professor Emeritus Carl E. Atwood died January 5, 1993 in his 87th year. To honour his long and distinguished service to Forest Entomology, Conservation, and Education, the Zoology Department has arranged with the Department of Treasury of the University to establish a trust fund to support the **C.E. Atwood Memorial Lecture Series**. This arrangement allows anyone who contributes to the C.E. Atwood Memorial Lecture Fund to receive an income tax receipt.

Please send donations, labelled "C.E. Atwood Memorial Lecture Series", to Peter Thinh, Zoology Department, 25 Harbord St., University of Toronto, Toronto, Ontario, M5S 1A1.

W.G. Friend  
Toronto

**Vincent G. Dethier (1915-1993)**

Vincent G. Dethier died of a heart attack on September 8 1993 at the Cooley Dickinson Hospital in Northampton. He was 78. Vincent Dethier was born in Boston in 1915 and took three degrees from Harvard University. In 1975 he began teaching at the University of Massachusetts where he held the Gilbert Woodside Chair in Biology. In 1986 he became the first director of the University's Neuroscience and Behaviour Program. Professor Dethier is perhaps best known for his book *To Know a Fly*, an introductory text on the analysis of insect nervous systems. In 1992 he received the John Burroughs Medal for Distinguished Nature writing for his book *Crickets and Katydid, Concerts and Solos* (Harvard University Press). Vincent Dethier was a long-time member of the Entomological Society of Canada.

## NEWS OF ORGANIZATIONS

### International Commission on Zoological Nomenclature

Applications published in the *Bulletin of Zoological Nomenclature*

The following applications were published on 30 September 1993 in Vol. 50, Part 3 of the *Bulletin of Zoological Nomenclature*. Comment or advice on these applications is invited for publication in the *Bulletin of Zoological Nomenclature* and should be sent to the Executive Secretary, I.C.Z.N., c/o The Natural History Museum, Cromwell Road, London SW7 5BD.

#### Case 2841 *Platynectes Régimbart*, 1879 (Insecta, Coleoptera): proposed conservation

Anders N. Nilsson

Department of Animal Ecology, University of Umeå, S-901 87 Umeå, Sweden

**Abstract.** The purpose of this application is to conserve the specific name *Platynectes Régimbart*, 1879 for a genus of diving water beetles (family DYTISCIDAE). It is threatened by the unused senior synonym *Plateocolymbus* Gistel, 1857.

The following **Opinions** were published on 30 September 1993 in Vol. 50, Part 3, of the *Bulletin of Zoological Nomenclature*:

Opinion 1741. *Gerris paludum* Fabricius, 1794 (currently *Aquarius paludum*; Insecta, Heteroptera): specific name conserved.

Opinion 1742. *Lincus* Stål, 1867 (Insecta, Heteroptera): conserved; *L. croupius* Rolston, 1983: specific name not conserved.

Opinion 1743. TACHINIDAE Fleming, 1821 (Insecta, Coleoptera): spelling emended to TACHINUSIDAE to remove homonymy with TACHINIDAE Robineau-Desvoidy, 1830 (Insecta, Diptera), and TACHYPORIDAE MacLeay, 1825 (Insecta, Coleoptera): given precedence over TACHINUSIDAE Fleming, 1821.

Opinion 1744. *Cheilosia* Meigen, 1822 and *Pyrophaena* Schiner, 1860 (Insecta, Diptera): conserved.

Opinion 1745. *Copromyza limosa* Fallén, 1820 (currently *Leptocera (Rachispoda) limosa*; Insecta, Diptera): lectotype replaced, so conserving the usage of the specific name and also that of *Leptocera (Rachispoda) lutos*a (Stenhammar, 1855).

Opinion 1746. *Drosophila putrida* Sturtevant, 1916 (Insecta, Diptera): holotype replaced by a neotype.

Opinion 1747. *Eristalis* Latreille, 1804, *Helophilus* Fabricius, 1805, *Xylota* Meigen, 1822 and *Eumerus* Meigen, 1822 (Insecta, Diptera): conserved.

Opinion 1748. EPHYDRIDAE Zetterstedt, 1837 (Insecta, Diptera): given precedence over GYMNOMYZIDAE Latreille, 1829.

#### *Proceeding of the Entomological Society of Manitoba*

The *Proceedings of the Entomological Society of Manitoba* is published annually by the Entomological Society of Manitoba and contains scientific research papers, abstracts from our annual scientific meeting and certain Society business. During the last three years we have added refereed scientific papers and will continue to significantly increase the number of scientific research papers within the *Proceedings* in the future. The *Proceedings* is sent to 110 scientific institutions world-wide and to approximately 140 members of the society.

The *Proceedings* now represents the only local "Prairie" orientated publication for dissemination of refereed research papers highlighting Canadian prairie entomology. It is intended as a forum for authors primarily from Alberta, Saskatchewan, Manitoba and adjacent states to publish papers of local interest. The society extends an invitation to prairie readers of the *ESC Bulletin* to submit research papers with a local or "prairie" flavour. There are no page charges, therefore authors need cover only the costs of reprints. The deadline for submission of research papers for the next issue of the *Proceedings* (Volume 49) is **March 31, 1994**.

Manuscripts may be sent to:

Dr. A.R. Westwood

Editor, *Proceedings of the Entomological Society of Manitoba*,

c/o Forestry Branch, Manitoba Natural Resources,

300-530 Kenaston Blvd.,

Winnipeg, Manitoba R3N 1Z4

### ESO Room at University of Guelph

When the Ontario Agricultural College became home to the extensive library holdings of the Entomological Society of Ontario in 1906, the College agreed to provide the Society with some space for its operations and archives. The quarters which the Society held for many years served for storage. When the Department of Environmental Biology at the University was assigned new facilities in the Bovey Building, it was feared that the building which housed the Society's archives would be demolished. Several members of the Board of the Society brought the issue and the obligation to the attention of the Dean of the Ontario Agricultural College and the Chairperson of the Department of Environmental Biology.

The fears for the loss of the space were allayed when the University decided that the building with the Society's space would not be demolished. However, following the Society's request for space, the Chairperson of the Department of Environmental Biology was able to provide extra space for the Society. Thus, the Society now has its original storage room and an additional splendid room for its use. The Society extends its gratitude to Dr. C.R. Harris, Chair, Department of Environmental Biology and the Dr. R.J. McLaughlin, Dean, Ontario Agricultural College, for their help and efforts for the Society.

The renovations of the room that the Society now occupies took place over about 9 months. Volunteer labour, some donated material, and some Society funds have been used to make the room into a pleasant space for the Society's meetings. Furniture has been obtained to provide for a board-room table and chairs. Some of the Society's filing cabinets have been moved to the room, as well. All in all, there is little left to do to accommodate the rest of the needs of the Society in using the room. Some wall decorations are needed, and photographs from the archives may be copied and framed. Pictures of insects may also be hung. Some book shelving is also needed to accommodate the *Proceedings* and other reference material.

Apart from serving the needs of the Society, the room can be used by members who want some temporary space in which to work or study when they visit the University. So far, the Society has not had any applications for such use, but would welcome them.

P.G. Kevan  
Guelph

## PUBLICATIONS BOOK NOTICES

**Winston, M.L. 1992. *Killer Bees: The Africanized Honey Bee in the Americas*. Harvard University Press, Cambridge, MA, U.S.A. 162 pp. Hardcover \$(U.S.)19.95; softcover \$(U.S.)10.95.**

This book was previously available only in hardcover, and was reviewed for the Entomological Society of Canada by G.W. Otis in the September 1992 issue of the *Bulletin* (Vol. 24, No. 3: 128-129).

**Hengeveld, R. 1992. *Dynamic Biogeography*. Cambridge University Press, New York, NY, U.S.A. 249 pp. Softcover.**

Dynamic biogeography concerns the study of biological patterns and processes on broad, geographical scales and time scales. This book contains a general introduction to the methodology of biogeographical classification, and presents ideas about the dynamic structure of species ranges. Climate is emphasized as a basis for explaining many biogeographical patterns, and the book has an ecological focus. By concentrating on spatial biological processes, the author tries to unify some of the diverse and apparently unrelated phenomena within biogeographical research. The book is comprised of 13 chapters in four parts. Part I discusses the methodology of biogeographical classification, and Part II concentrates on classifications in which the identity of the taxon remains of little concern, but where the identity of certain biological properties is important. Here, the aim is to describe and explain continuous regional or global trends, or discontinuities in the frequency of one or more biological properties in space. Part III discusses classifications and biological phenomena for which knowledge of both the taxon and its biological properties is required. The focus is on patterns and processes within species ranges, rather than on supra-specific units or trends. Part IV focuses on the need for integration of multiscale phenomena, where the author emphasizes that only by integration of various approaches, aspects, and phenomena can biogeography move from its anecdotal phase and acquire the status of an independent, mature biological discipline.

**Coupar, P., and M. Coupar. 1992. *Flying Colours. Common Caterpillars, Butterflies and Moths of South-Eastern Australia*. International Specialized Book Services, Portland, OR, U.S.A. 119 pp. Hardcover \$(U.S.)19.95.**

This book focuses on the most common species of butterflies found in the temperate regions of south-eastern Australia with the aim to "create an awareness and understanding of caterpillars and their dramatic transformation into the adult butterfly or moth". There are two parts. Part I summarizes the evolutionary history of south-eastern Australia's Lepidoptera, and provides basic information on their biology including life cycle, larval structure, camouflage and defence, and predators, parasites and diseases. Methods of locating, collecting, and rearing Lepidoptera are described, and there is a section on attracting butterflies and moths to your garden. Part II, which comprises the bulk of the book, provides detailed descriptive information for 67 species of moths (Anthelidae, 6 species; Arctiidae, 6 species; Geometridae, 18 species; Lasiocampidae, 5 species; Limacodidae, 3 species; Lymantriidae, 3 species; Noctuidae, 12 species; Notodontidae, 2 species; Oecophoridae, 2 species; Psychidae, 1 species;

Pyrilidae, 2 species; Saturniidae, 2 species; Sphingidae, 1 species; Thaumetopoeidae, 2 species; Tortricidae, 1 species; Zygaenidae, 1 species) and 23 species of butterflies (Hesperiidae, 4 species; Lycaenidae, 5 species; Nymphalidae, 8 species; Papilionidae, 3 species; Pieridae, 3 species). For each species, one page of information is presented which includes beautiful color photographs of the caterpillar and adult (occupying most of the page) as well as characters of caterpillars and adults, their distribution, host plant(s), pupation site, and flight period of adults.

**Fallis, A.M. 1993. *Parasites, People, and Progress: Historical Recollections*. Wall and Emerson, Inc., Toronto, ON, Canada. xii + 160 pp. Softcover \$(Can.)16.50.**

This book traces the development of research and treatment in parasitology in Canada through discussion of the careers and personal experiences of the major persons involved in its growth. Much of the information for the recent history was obtained from oral interviews. Rather than summarizing in detail or critically assessing the contributions of those responsible for the present status of parasitology as a discipline in Canada, it focuses on some of the events and many of the personalities associated with research in parasitic protozoa, helminths, and parasitic arthropods. It includes historical data on malaria and typhus, two parasitic diseases that were of special concern during the nineteenth century, both of which stimulated research by Canadians.

**Brooks, D.R., and D.A. McLennan. 1993. *Parascript. Parasites and the Language of Evolution*. Smithsonian Institution Press, Washington, DC, U.S.A. x + 429 pp. Hardcover \$(U.S.)69.00; softcover \$(U.S.)25.00.**

The objectives of this book are: 1) to show what can be accomplished by a concerted effort to delineate the phylogenetic relationships among members of large groups of species, 2) to use the phylogenetic data base to evaluate some of the myths and misconceptions about parasites and their evolution, and 3) to demonstrate that parasite-host systems are excellent models for evolutionary studies and for use as biodiversity probes. The authors believe that most stories about parasite evolution focus on the host rather than the parasite, and that this has retarded the development of understanding about parasite evolutionary biology. An important premise of the book is that every story about parasite evolution can be investigated fruitfully by using the rigor of modern phylogenetic and historical ecological analysis. The empirical foundation of the evolutionary investigations presented in the book flow from phylogenetic systematic studies. The book is subdivided into four sections. The introduction provides definitions of parasitism and gives a brief history of parasite evolutionary biology. The second section, entitled "Parascript", introduces phylogenetic systematics as "the Rosetta Stone for parascript" and covers a range of topics and examples some of which include "Blood Flukes and Turtles: A Story of Continental Drift", "Neotropical Freshwater Stingrays and Their Parasites: A Tale of Two Oceans", and "Nematode Parasites of Great Apes: Parasitological Traces of Human Origins and History". The third section, entitled "Adaptation and Adaptive Radiation of Parasites", explores various myths, some of which include "Host Specificity is a Unique and Important Feature of Parasite Evolution", "Parasites are Simple and Degenerate Compared with Free-Living Organisms", "Parasites Exhibit High Levels of Adaptive Plasticity in Morphology", and "Parasites are Paradigms of Adaptive Radiation". The final section of the book, entitled "Evolutionary Biology: A Unifying Theme for Parasitology in the Twenty-first Century" reinforces the theme that because parasitic evolutionary biology does not differ from the evolutionary biology of non-parasites, parasite systems are excellent models for a variety of general evolutionary studies, and may become the systems of choice for some.

## BOOK REVIEWS

**Rosenberg, D.M., and V.H. Resh (Eds.). 1993. *Freshwater Biomonitoring and Benthic Macroinvertebrates*. Routledge, Chapman and Hall Inc., New York, NY, U.S.A. 488 pp. Hardcover \$(U.S.)65.00.**

The past decade has witnessed tremendous growth in the field of freshwater biomonitoring using benthic macroinvertebrates. It is thus particularly appropriate that a volume whose purpose is to assess recent developments and provide recommendations on future directions in the science should appear at this time. Rosenberg and Resh have done an excellent job in editing this multi-authored text intended for "managers, regulatory biologists and researchers" with an interest in the development of improved biomonitoring techniques.

The book can be viewed as consisting of three sections. The first three chapters provide an introduction to the use of freshwater biomonitoring (Rosenberg and Resh) and its historical context (Cairns and Pratt), as well as a chapter dealing with access to the biomonitoring literature (Marshall).

The second section (Chapters 4 to 8) forms the basis of the book. Johnson, Wiederholm, and Rosenberg (Chapter 4) provide an overview of currently available biomonitoring techniques. This chapter stresses the need for monitoring programs which operate at the level of individual biochemical and physiological responses as well as life history, population, and community level responses. The authors also provide extensive tables detailing the responses of individual taxa to specific pollutants, and while an exhaustive review of all pertinent literature is beyond the scope of this Chapter, these tables will provide a valuable reference.

Resh and McElravy (Chapter 5) review 90 recent publications concerning disturbance effects on benthic macroinvertebrates (45 lentic, 45 lotic) to assess quantitative techniques currently employed in the field. These authors then provide a series of recommendations which will help to improve and standardize future biomonitoring studies.

Chapter 6 (Resh and Jackson) provides a balanced overview of the development and current state of rapid assessment approaches to biomonitoring. Norris and Georges (Chapter 7) discuss the need for refinement in the analysis and interpretation of benthic macroinvertebrate data and cover topics relating to study design, univariate, multivariate, and trend analyses. The focus on statistical analyses and experimental design (see also Cooper and Barmuta, Chapter 11) emphasizes that these considerations play an important role in environmental impact assessment. In fact, this recent focus has been the subject of at least two international workshops (see Australian Journal of Ecology 18, 1993; Use of biostatistics in benthic ecological studies, Proceedings of the sixth Technical information workshop, 41<sup>st</sup> annual meeting of the North American Benthological Society, Calgary, Alberta, May, 1993). Finally, Reice and Wohlenberg (Chapter 8) use a number of case studies to illustrate the importance of an ecosystem approach to freshwater biomonitoring.

The final section of the book (Chapters 9 to 12) concentrates on study areas directly related to freshwater biomonitoring including chapters on paleolimnology (Walker), toxicity testing (Buikema and Voshell), field experiments (Cooper and Barmuta), and a concluding chapter by Brinkhurst which discusses future directions in freshwater biomonitoring using benthic macroinvertebrates.

A certain amount of overlap between chapters is inevitable in any multi-authored text. In this case, however, the overlap serves to reinforce several themes which are deemed important by several of the contributors. First, there is a great need for an improved understanding of the basic ecology and taxonomy of freshwater macroinvertebrates. It is difficult, if not impossible, to understand disturbance effects on an individual, population, or community without an adequate understanding of individual, population, and community ecology. Second, there is a need to make better use of the available statistical techniques in interpreting benthic macroinvertebrate data and to include rigorous, well-defined experiments in association with biomonitoring programs. A stronger focus on statistical analyses and experimentation will allow for an improved elucidation of spatial and temporal patterns within the community and insight into the underlying mechanisms producing such patterns. Interestingly, there is some disagreement among the contributors, particularly over the usefulness of indices and measures of taxonomic richness in biomonitoring.

In conclusion, Rosenberg and Resh have provided a timely and very useful overview of freshwater biomonitoring using benthic macroinvertebrates. The chapters are well-organized and complement one another; many of the more substantial chapters include helpful conclusion/recommendation sections. This book will be of value to any student, researcher, or manager with an interest in freshwater biomonitoring.

Kevin J. Cash  
Garry J. Scrimgeour  
National Hydrology Research Institute  
Saskatoon, Saskatchewan

**Owen, J. 1991. *The Ecology of a Garden: The First Fifteen Years*. Cambridge University Press. xii + 403 pp. Hardcover \$(U.S.)100.00.**

Owen's book is a chronicle of a backyard biodiversity study. Over 15 years, she has watched, reared, and collected an incredible variety of wildlife in her otherwise unremarkable garden, providing us with an unusually large amount of data about insect populations and their fluctuations. For entomologists, there is much to be learned from this investigation, especially since the author operated a Malaise trap in her backyard throughout this period. Affronted by Elton's (1966) characterization of suburban gardens as "biological deserts", Owen recorded 21 butterfly, 343 moth, 91 syrphid, 533 ichneumonid, 92 aculeate wasp, and 251 beetle species in her backyard. Many of these were found to reproduce in the garden, including a number of moths that developed on so-called "useless" exotic plants.

Owen credits three characteristics of gardens for their species richness: contrived diversity of plants, permanent succession of the plant community, and structural heterogeneity or foliage height diversity. In addition, no herbicides or pesticides were used to control occasional outbreaks of weeds or insect pests. She goes on to claim that since gardens comprise such a large portion of the British countryside, they should be considered the country's most important asset for conservation of wildlife.

Conservation, in this sense of the word, is a very different concept than that usually thought of in North America. Here, conservation is something that has to be done to rescue endangered species like whooping cranes and Florida panthers. The fauna of Owen's garden would be considered a widespread, weedy, albeit diverse, fauna that would be preserved with many types of land management other than complete paving of the habitat. Apparently, in Britain, conservation of this widespread diversity is as

great a priority as conservation of truly endangered species, which by and large are restricted to shrinking patches of old-growth forests and habitats maintained by antiquated agricultural methods. This mania for diversity should be tempered with the knowledge that its promotion can come at the expense of the truly endangered fauna. A recent book on insect conservation in Britain (Fry & Lonsdale 1991) actually advises owners of woodland to open up their forests, creating more habitat for such weedy species and increasing on-site diversity. This increased diversity in the newly created forest edge doubtless comes at the expense of organisms that rely upon the presence of deep shade, high humidity, and rotting wood found in old-growth forests (Speight 1989). Furthermore, in birds it has been shown that an increase in forest edge increases the likelihood that nests will be subject to predation or parasitism (by cowbirds). Is it not equally likely that increasing the species richness and numbers of ichneumonids in an area will similarly lead to increased parasitism of forest-dwelling and possibly endangered insects?

Another major theme is the use of the Malaise trap. These devices have of course been used by entomologists for years, especially since their popularization by Townes (1972), but it is still true that there has been little scientific investigation of their catch. Owen shows us (Fig. 7.1 in her book) that it takes one year to collect 52% and about two years of continuous trapping to collect 78% of the 15 year total of 91 syrphid species. For ichneumonids, which were identified for "only" three years, the dropoff in new species was similar, but because there are many more ichneumonid species, it probably would take several more years to catch the same 78% of the total fauna. The summary statement on page 183, that the usual grant period of two to three years is far too short to say anything meaningful about insect population fluctuations, applies equally well to statements about species richness gleaned from short biodiversity surveys.

In summary, both ecologist and systematist will find useful information in this well-written and profusely illustrated book. Hopefully, we can look forward to another rich trove of knowledge after the next 15 years have passed.

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Brian V. Brown  
Entomology Section  
Natural History Museum of Los Angeles County  
Los Angeles, California

Papaj, D.R., and A.C. Lewis (Eds.). 1993. *Insect Learning, Ecological and Evolutionary Perspectives*. Routledge, Chapman and Hall Inc., New York, NY, U.S.A. xiii + 398 pp. Hardcover \$(Can.)68.95.

*Insect Learning* is an important book because it brings together and for the first time the literature of an exciting and rapidly growing research field that is still in its infancy. The title and the subtitle, *Ecological and Evolutionary Perspectives*, are most appropriate.

The presentation of the hardcover copy I had was excellent with respect to cover illustration, quality binding, size (23 x 16 x 3.5 cm), typesetting on acid-free paper, and quality of figures. *Insect Learning* is a multi-authored book that presents 14 chapters of approximately equivalent length written by 22 authors (or co-authors) of international stature. This book is well but densely written. Perusal of the references, cited at the end of each chapter, reveal that the authors have contributed much to the field. The twelve-page index is well done and will be a useful tool for the reader.

The four-page preface, authored by the editors, presents the scope and the content of the book. It would have been interesting for the lay reader to have a true introductory chapter on concepts. However, it would be fair to say, as acknowledged by the editors in the preface, that consensus on matters related to the behavioral ecology of learning is currently beyond our grasp. The titles of the chapters are: 1) Aversion Learning and Feeding, 2) Ethological and Comparative Perspective on Honey Bees, 3) Learning of Host-Finding Cues by Hymenopterous Parasitoids, 4) Functional Organization of Appetitive Learning and Memory in a Generalist Predator, the Honey Bee, 5) Merging Mechanism and Adaptation: An Ethological Approach to Learning and Generalization, 6) Motivation, Learning and Motivated Learning, 7) Choosing Hosts and Mates: The Value of Learning, 8) Learning and Behavioral Ecology: Incomplete Information and Environmental Morphology, 9) Learning and the Evolution of Resources: Pollinators and Flower Morphology, 10) Automatic Behavior and the Evolution of Instinct: Lessons from Learning in Parasitoids, 11) Comparative and Experimental Approaches to Understanding Insect Learning, 12) Application of Learning to Pest Management, 13) Cognition in Bees: From Stimulus Reception to Behavioral Change, 14) Afterword: Learning, Adaptation and the Lessons of O. The titles correctly reflected the content.

I felt the positive influence of senior editor Daniel Papaj in many ways. First, he wrote three interesting contributions: Foreword, and Chapters 10 and 14. Second, his papers are often cited in the references of many chapters. Finally, many authors thanked him for his critical comments on the manuscript. The editors should be commended for their work.

Overall, *Insect Learning* is an excellent book that has actually no competitors on the market. As indicated by its title, it has a small market niche. However, reading *Insect Learning* will not only be profitable to students interested in insect ecology, behavior and evolution, but also to persons interested in cognitive sciences.

As suggested by Papaj in Chapter 14, insects are simple but interesting models for studying artificial intelligence. Owing to the multi-faceted applications (both civilian and military) of artificial intelligence, research projects on insect learning are likely to be more numerous. *Insect Learning* will be a useful reference in that context.

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**Royama, T. 1992. *Analytical Population Dynamics*. Routledge, Chapman and Hall Inc., New York, NY, U.S.A. xvi + 371 pp. Hardcover \$(Can.)93.95.**

This book comprehensively outlines a novel approach for analyzing and interpreting long-term population dynamics. The approach is based on using stochastic processes as theoretical models of population fluctuations, comparing observed patterns with the theoretical, and using this to divine the underlying ecological mechanism behind the fluctuations. The approaches are illustrated using careful analysis of several examples, which makes this book of interest to applied and theoretical population ecologists.

The book is divided into two parts. Part One, "Theoretical Bases of Population Dynamics", consists of four chapters which develop theory. Part One is somewhat difficult to follow due to the complexity of the mathematical and logical arguments used; however, it is well worth the effort. Chapter One introduces and defines the concepts of population persistence and regulation and examines the statistical properties of a population process required for these. Royama then examines density-dependent and density-independent factors as ecological mechanisms responsible for regulation and perturbation respectively. Chapter Two discusses statistical properties of population processes and examines patterns of fluctuations resulting from linear and non-linear models with varying orders of density dependence and the addition of density-independent perturbations. Again, ecological mechanisms accounting for these patterns are presented and discussed as well as potential pitfalls in interpretation. Royama also discusses the Moran effect, an important theorem explaining synchrony in population cycles over geographic areas. Chapter Three introduces the use of autocorrelation functions, reproductive surfaces as diagnostic aids for analyzing density-dependent and density-independent effects. Royama carefully points out errors of interpretation which can arise due to spurious correlations and smoothing series. Chapter Four generalizes logistic population growth to discrete time and further generalizes the model to allow for resource fluctuations between time steps and lagged density-dependence. This increases the model's utility and allows it to be used for examining predator-prey interactions.

Part Two, "Analysis of Classic Cases", applies this theory to examples such as lynx, snowshoe hare, azuki bean weevil, and outbreaks of spruce budworm. Part Two is much easier to follow than Part One, and could be read first as Royama makes every effort to refer readers to appropriate sections of Part One when necessary. Each chapter examines the data set upon which the analysis is based, critically reviews earlier work focusing on ecological mechanisms, and reinterprets results based on the analytical methods presented in Part One.

Overall, the book is well-written and organized. Both Parts are prefaced with a brief summary outlining their purpose and intent as a whole, as well as the contents of the constituent chapters. Individual chapters also begin with an outline of their contents allowing the reader to follow the threads of Royama's arguments and deductions as they are logically developed. I would recommend this book to anyone with an interest in population dynamics. It would make an excellent text for a graduate level course.

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Van Lenteren, J.C., A.K. Minks, and O.M.B. de Ponti (Eds.). 1992. *Biological Control and Integrated Crop Protection: Towards Environmentally Safer Agriculture*. Pudoc Scientific Publishers, Wageningen, The Netherlands. Hardcover \$(U.S.)\$82.00.

This volume contains the proceedings of an international conference organized by the IOBC/WPRS (= International Organization for Biological and Integrated Control, West Palaearctic Regional Section) and held at Veldhoven, The Netherlands, 8-13 September 1991. The objectives of the conference were to take an inventory of the current situation in integrated agricultural protection and management and, by bringing together scientists, industrialists, politicians, extension specialists, producers, and consumers, to coordinate future actions in this area.

Following an Introductory Section (conference objectives, structure, and activities of IOBC), the volume is divided into a Research Section, a Policy Section, and an Extension Section. In the Research Section, there are reviews of current techniques in biological and integrated control in relation to chemical control techniques as they apply to orchards, vineyards, vegetables, olives, protected crops (glasshouses), cereals, and soilborne pests. The potential and current usage of biological and integrated control in these crops varies from high in glasshouses, through demonstrated usefulness in other crops, to soilborne pests, where no biological control agent has provided consistent, adequate control on arable crops. These are useful expositions of the techniques that are available to meet consumer and political demands for reductions in food and environmental contamination by reducing pesticide usage.

In the Policy Section, representatives of agricultural ministries in The Netherlands, Sweden, France, and Germany review policy developments and current legislation, particularly in relation to limiting pesticide usage in their countries. Their policies are moving in the same direction, and in general, it is expected that harmonization among countries with new European Community regulations will have a positive effect on the implementation of these policies. A presentation on the Italian commitment to the limited use of pesticides, presented by a representative of an experimental institute, gives much more emphasis to the structure of research groups than to the development of policy.

The Extension Section contains four case histories of IPM programs: in Italy, Switzerland, England and Wales, and Denmark. The Italian example is directed primarily toward orchards, but recently field and glasshouse crops have been included. The other papers focus on fruit production, glasshouse crops, and field vegetables. The differences and similarities in these national programs warrant careful attention because, although the problems are similar, the solutions may differ. All agree that a major extension effort is needed to train growers to utilize new techniques and that initial costs are high. Short and long term approaches to providing these educational and operational (e.g., monitoring) services vary among countries and crops. There seems general agreement that while governmental policy strongly supports the introduction of IPM, these same governments are reducing their financial commitments to agricultural extension. Growers tend to be unwilling to buy such services until their utility has been demonstrated in a local farm situation. We all recognize this dilemma.

The closing address, "Options for integrated agriculture in Europe", by R. Rabbinge, Department of Theoretical Production Ecology, Wageningen Agricultural University, provides a lucid overview of the problems that must be faced to respond to the need for more rational crop production. The "Best Technical Means" (where each external input is used at a minimal level in such a way that the efficiency of each is maximal) has the highest efficiency at high levels of production per unit area. Therefore,

production on marginally suitable land is wasteful of inputs and perhaps agricultural production should be concentrated in high production areas. Many of the variable inputs (e.g., pesticides and nutrients) are low-priced in relation to the returns, and tend to be over-used. The possibility of a tax on these inputs, to discourage overuse and to provide funds for the implementation of IPM, is discussed. The conclusions and detailed recommendations are worth study by all interested in crop production and protection. This is a useful volume, particularly to policy makers and legislators who control agricultural research, extension, policies, and subsidies.

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**Wise, D.H. 1993. *Spiders in Ecological Webs*. Cambridge University Press, New York, NY, U.S.A. 328 pp. Hardcover \$(U.S.)79.95.**

W.S. Bristowe, Britain's most famous arachnologist, suggests that the weight of insects eaten by British spiders in one year is greater than that of Britain's human population. While such a calculation conjures up the image of sixty million people standing on one side of a balance with billions of insects on the other, it is nevertheless an impressive statistic about the role spiders have as terrestrial predators.

In his book *Spiders in Ecological Webs*, David Wise sets the stage for understanding this role by using an analogy relating to theatre. He portrays spiders as acting out an ecological drama scripted from millions of years of evolution. To interpret this drama, he feels we must be more than passive observers; we need to study the script, look backstage, and unmask and communicate with the leading characters.

Wise describes the ecological web as "the network of both indirect and direct interactions that link together the organisms in a community". He has three goals in explaining the role of spiders in ecological webs: (1) understanding how spiders act as generalist terrestrial predators, (2) examining the interactions between spiders and other organisms in terrestrial habitats, and (3) critiquing the design and interpretation of field experiments for testing hypotheses about spider ecology.

The book has nine chapters. Chapter 1 introduces the major families of spiders and discusses how silk utilization (the basis for the broad division of spiders into web builders and wanderers) is related to differences in foraging behaviour and habitat use. Chapter 2 discusses how spiders have adaptations consistent with being prey-limited and often show rates of growth and reproduction lower than what appears to be physiologically possible. Chapters 3 and 4 review laboratory and field studies of interspecific competition and discuss the failure of the competitionist paradigm. Chapter 5 examines the effect of abiotic mortality factors, natural enemies, dispersal, and territoriality on intra- and interspecific competition for prey. Chapter 6 critiques the role of spiders as predators and their potential as biocontrol agents in agroecosystems. Chapter 7 discusses the importance of substrates (vegetation, leaf litter, etc.) in determining the composition of spider communities. Chapters 8 and 9 review the design and interpretation of field experiments for testing hypotheses about spider ecology.

Over the last decade a number of books on spider biology have been published covering topics such as spider communication, neurobiology, ecophysiology, evolution, and behavioural ecology. *Spiders in Ecological Webs* is an important addition to this list. Just as Wise sees spiders as tools for the

experimentalist, his book should be seen as an important tool for experimental ecologists trying to unravel how carnivores fit into ecological webs. Its critique of experimental design for field-based research should also be of interest to ecologists working with non-predators.

Wise's writing is clear and concise, but also has a relaxed style that is enjoyable to read, a pleasure partly due to his liberal use of puns and metaphors. Numerous headings and subheadings within the nine chapters clearly outline the topic, subtopic, or research program being discussed and each chapter has a short synopsis.

Wise has spent many years prodding and poking spiders to unravel the mysteries of their ecological webs. Although the small and hairy characters on his stage will probably gain little benefit from having their mysteries solved, students of ecology will certainly benefit from reading Wise's interpretation of their drama, *Spiders in Ecological Webs*.

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Scoble, M.J. 1992. *The Lepidoptera: Form, Function, and Diversity*. Oxford University Press, Oxford, U.K. xi + 404 pp. Hardcover \$(Can.)121.50.

The Lepidoptera represents one of the four major orders of insects and one of the most diverse groups of the animal kingdom. It is arguably one of the most popular groups of organisms among entomologists, biologists, naturalists, collectors, and nature-lovers of all kinds. The last three decades have seen a flurry of works on the higher classification of Lepidoptera, the discovery of a new primitive suborder (Heterobathmiina), and advances in morphology, anatomy, and behavior that have led to extensive reassessment of the position of many basal lineages of the order. Yet most of these advances were scattered in the specialized literature. Scoble's book is a welcome synthesis that provides a modern, updated overview of some of the fundamental aspects of the Lepidoptera, covering morphology and its functional, adaptive, and phylogenetic implications, and a very useful and critical overview of the higher classification (families and up) of the order. Scoble stresses in the introduction that the emphasis of his book is "on the general form and function of Lepidoptera with an eye to phylogeny" (p. 1). The strong phylogenetic slant of the author is indeed pervasive throughout much of the book. Scoble provides, however, a remarkably balanced presentation of phylogeny and classification.

The book is divided into three parts. Part I comprises approximately one-half of the book (excluding references) and covers basic lepidopteran morphology and the way structures are used in the life of Lepidoptera. It is composed of six chapters, the first of which is the general introduction to the book and one of which (Chapter 5) is devoted to immature stages. Chapter division follows the adult body plan in treating the head and its use in feeding and sensation (Chapter 2), the thorax, including wings, and associated functions and topics such as flight, migration, and color (Chapter 3), and the abdomen (Chapter 4). The coverage of immature stages (Chapter 5) seems a bit brief in view of the importance of larvae. But this is understandable because research on and knowledge of immature Lepidoptera, although fairly impressive, still lags far behind that of adults. The treatment of hearing, sound, and scent (Chapter 6) is particularly fascinating. The organization and presentation of Part I is basically

dichotomous: structures are described first, followed by a discussion of their function in the context of the life of the Lepidoptera and of their adaptations to their environment and way of life. Much of the subject matter sets the stage for the discussion in Part III.

Part II comprises only one very short chapter (15 pages) and deals with the environmental and ecological importance of Lepidoptera. Topics such as the impact of Lepidoptera on the environment, mainly as phytophages, the diversity of plants consumed by larvae, Lepidoptera-plant relationships, including plant defences and the classical question of co-evolution, pollination, etc., are overviewed. In part because of its brevity, Part II appears a bit odd. Despite the disclaimer in the general introduction (p. 2) that this part was not intended as an ecological treatment of the Lepidoptera, I could not help but feel that the treatment was overly brief and superficial, and I was left thirsting for more. For example, a topic like "the consequences of plant consumption", which is presented as one of the main subheadings of the chapter, is covered in a mere one-third of a page without a single reference citation. Given the importance of Lepidoptera in diversity and abundance, and their impact as major phytophages on the terrestrial environment and pests, a slightly more expanded treatment would have been justified for Part II. However, Scoble may be excused because the topics of Part II are not really at the core of the subject matter of the book.

Part III is an overview of the major taxa of Lepidoptera and will perhaps elicit the broadest interest among readers. Those interested in the essentials about particular groups (definition, diversity, state of classification, and most recent literature) will find the book especially useful. After an introductory chapter to the current classification of the Lepidoptera and a brief historical overview, Scoble presents a discussion of all the superfamilies and families of Lepidoptera. The classification adopted by Scoble follows "the current broad consensus" (p. 189). While Scoble expresses some reluctance with the scheme, his choice is quite sensible because the family-level classification of the Lepidoptera is currently in a major state of flux. His classification differs, for example, from that of Nielsen and Common (1991).

Part III is subdivided into four chapters covering the primitive Lepidoptera, the early Heteroneura, the lower Ditrysia, and the higher Ditrysia. Each family is discussed with subsections on general aspects, adults, immature stages, biology, and classification. In the larger families, subfamilies are also discussed. A focused discussion is lacking on the lepidopteran groundplan, which is central to understanding many of the statements that are cast in phylogenetic terms concerning the interpretation of character states. There could have been a short section summarizing this near the beginning, in order to provide a clearer basis for setting off the discussion of character evolution through the families. Instead, the reader must mentally reconstruct this by reference to Part I and the sections on primitive groups. The treatment of families is uneven in length and details, generally reflecting the degree of knowledge attained about each one. The Gelechiidae, for example, with over 4,000 known species and probably at least as many undescribed, receive only a half-page treatment, whereas the Cossidae (about 700 species) which are taxonomically much better known, are discussed in far more detail over 3.5 pages. The impression created for some families is that they are relatively insignificant but this is largely unavoidable.

The discussion of higher taxa is cast heavily but excellently in cladistic terms. Readers unacquainted with terms like 'monophyly', 'polyphyletic', 'apomorphic', 'plesiomorphic', 'homoplasious', would be well-advised to check a systematics textbook explaining what they mean and subtend. That said, Scoble must be commended for the clarity of his treatment and his quest for indicating unambiguous (and monophyletic) group definitions as well as pointing out weakly defined taxa. The discussions on the state of classification of the various families and higher groups are especially valuable

because we are, for once, getting away from the traditional litany of characters listed in textbooks to characterize taxa without clear indications of *what exactly* defines them. The discussion is peppered with numerous personal communications reflecting the current effervescence in research on the higher classification of Lepidoptera.

The illustrations are abundant and generally excellent. The line drawings are clear and well-reproduced, although the many half-tones are generally rather "soft" and could have benefitted from a little more contrast. There are four color plates comprising a total of 34 superb photographs showing various wonderful adaptations of all life stages of Lepidoptera. As with any book on Lepidoptera, however, one would have liked to see more such pictures, especially considering the high price of the book. Part III is supplemented by 17 black and white plates that are grouped at the end, showing spread adults representing all families (and many subfamilies) treated. The disappointing aspect of these photos is that many of the specimens photographed are rubbed or somehow in rather poor condition or poorly set, a fact that is puzzling with regard to widespread and common taxa for which specimens in mint condition could surely have been obtained. Scoble may be a bit quibbled for almost succumbing to the popularity of the macrolépidopterans by putting an undue number of illustrations of some groups. For example, the Nymphalidae butterflies (ca. 6,000 species) have six photos showing the different subfamilies whereas the Pyralidae (25,000 species, with an estimated 100,000 species) have only five photos, and the Tortricidae (over 5,000 species), only one photo.

The book is well-referenced with nearly 800 cited works, and includes an index. The writing is clear and concise, and the printing nearly free of typographical errors. In my review copy the printing was somewhat uneven, being noticeably paler on several pages. The red hardcover is well-bound and sturdy, but without a jacket, and its presentation is deceptively spartan, considering the high price of the book: besides the title, it is merely black-embossed with a Zygaenidae (the European *Zygaena lonicerae*, which is black and red just as it appears on the cover).

Overall, and despite the criticisms expressed above, Scoble has done an admirable job in synthesizing so much information in a book of reasonable length. I recommend it to all lepidopterists, entomologists, biologists, teachers, and students interested in a thorough overview of the Lepidoptera. It should form an excellent companion book to the Lepidoptera chapter in *The Insects of Australia* by Nielsen and Common (1991), which in spite of its title, has nearly global applicability. Despite a bit of overlap, these two works are nicely complementary to each other in providing an overall, modern, and outstanding coverage of this large insect order.

#### Reference

- Nielsen, E.S., and I.F.B. Common. 1991. [Chapter] 41. Lepidoptera (Moths and Butterflies). In Commonwealth Scientific and Industrial Research Organization, *The Insects of Australia*. Second Edition. Volume II, pp. 817-915.

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Foote, R.H., F.L. Blanc, and A.L. Norrbom. 1993. *Handbook of the Fruit Flies (Diptera: Tephritidae) of America North of Mexico*. Cornell University Press, Ithaca, NY, U.S.A. xii + 571 pp. Hardcover \$(U.S.)105.00.

This handbook is intended to be an identification guide for the 300 species of Tephritidae currently occurring (natively or introduced) in America north of Mexico. The geographical area covered includes Alaska, Greenland and Bermuda, as well as the whole of Canada and the contiguous United States; but excludes Hawaii, the Bahamas and other Caribbean islands. Recent successful introductions for the purpose of biological control of weeds are included among the species treated.

Research into tephritid taxonomy was commenced by the two senior authors in 1954 (R.H. Foote at the USDA Systematic Entomology Laboratory in Washington, and F.L. Blanc at the California Department of Agriculture in Sacramento). These authors have now retired, and have been succeeded by Allen Norrbom as the USDA specialist with responsibility for providing an identification service for Tephritidae.

The present work is not intended to be a systematic monograph, since it does not contain extensive morphological descriptions and generally omits male genitalic characters from consideration. Given this limitation, I think the work will be successful in achieving the stated objective of serving as an identification guide and will be in use for many years to come. The series of photographs of the wings showing their diagnostic pattern is particularly helpful. Maps showing distribution records within America north of Mexico are given for most species.

As well as serving as an identification guide, this handbook will also fulfill an important bibliographic function. All important North American species (taxonomic, biological, and economic) are cited under each genus and species. The consolidated reference list at the end of the work amounts to over 50 pages. Users who require more detailed information than contained in the text should thus be able to trace relevant specialized literature with relative ease. According to the authors, their coverage of the literature has been "thorough" up to about 1980, but numerous references up to about 1990 have also been included.

Although in general not intended to be revisionary in nature, this handbook includes some new nomenclatural proposals. These are summarized on page 46. Included are a proposal of a new tribe Acrotaeniini and a new subtribe Eurostina, two new generic synonymies, two new specific synonymies, one new combination, and four new lectotype designations. In view of the need for exact dating of new nomenclatural proposals, I place on record that the publisher's notice sent with my review copy is date-stamped August 16, 1993.

The quality of the printing and binding is excellent. All systematists, ecologists, and economic entomologists who need to identify and access information on tephritids may be recommended to obtain a copy of this handbook.

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## SCHOLARSHIPS AND GRANTS

### Entomological Society of Canada Graduate Research-Travel Grants Invitation for Applications

#### Preamble

To foster graduate education in entomology, the Entomological Society of Canada will offer two research-travel grants, awarded annually on a competitive basis. The intent of these grants is to help students increase the scope of the graduate training. These grants, up to a maximum of \$2,000, will provide an opportunity for students to undertake a research project or to do course work pertinent to their thesis subject that could not be carried out at their own institution.

#### Eligibility

To be eligible, a student must:

- 1) be enrolled as a full-time graduate student
- 2) be an active member of the Entomological Society of Canada

#### Format of the Application Form

The application form will be in the format of a grant proposal, where the applicant will provide the following information: 1) the subject of the thesis; 2) a pertinent review of the literature in the field; 3) a concise presentation of the status of the ongoing thesis research; 4) a description of the research or course work to be undertaken, clearly indicating a) the relevance to the overall goal of the thesis, b) an explanation of why such work cannot be carried out at the student's own university and c) the justification of the site where the research/course work will be carried out; 5) a budget for the proposed project; 6) anticipated dates of travel and date on which grant money is needed.

The application form should also be accompanied by: 1) an up-to-date C.V.; 2) a supporting letter from the senior advisor; 3) When appropriate, a support letter from the scientist or Department Head at the institution where the applicant wishes to go.

#### Evaluation Procedure

The scientific merit of each application will be evaluated by a committee that has the option of sending specific projects out for external review by experts in the field. A constructive written report, underlining the positive and negative aspects of the proposal, will be returned to the applicant.

#### Timetable and Application Procedure

Application forms, which may be obtained from the Secretary of the Society, must be completed and returned to the Secretary of the Society by **15 January 1994**. The committee will evaluate all applications by 30 April 1994 and determine if, and to whom, grants will be awarded. The successful applicants will be informed immediately, thereby providing sufficient time for students wishing to start in the fall to make necessary arrangements. Grants must be used in the 12 months following the award.

Recipients must provide a short final report, as well as a detailed list of expenses, in the three months that follow the trip. Any money not spent must be returned to the Society.

## **La Société d'entomologie du Canada Allocations de Voyage pour Étudiants Gradués**

### **Appels pour Allocations**

#### **Préambule**

Afin de promouvoir les études graduées en entomologie, la Société d'Entomologie du Canada offrira deux bourses de voyage associées à la recherche. Celles-ci seront décernées annuellement sur une base compétitive. Le but de ces bourses est de permettre aux étudiants gradués d'élargir les horizons de leur formation. Les bourses, d'une valeur maximale de \$2,000 permettront à des étudiants de réaliser un projet de recherche, ou de suivre des cours pertinents à leur sujet de thèse qui ne peuvent être entrepris dans leur propre institution.

#### **Éligibilité**

Afin d'être éligible, l'étudiant doit:

- 1) être inscrit à temps plein comme étudiant gradué
- 2) être un membre actif de la Société d'Entomologie du Canada

#### **Format du Formulaire de Demande**

Le formulaire de demande sera dans le style d'une demande d'octroi et l'étudiant devra fournir les renseignements suivants: 1) le sujet de la thèse; 2) une présentation de la littérature pertinente au domaine d'étude; 3) une présentation concise du statut du projet de recherche en cours; 4) une description de la recherche ou des cours qui seront entrepris, indiquant clairement a) la pertinence des objectifs généraux de la thèse, b) les raisons pour lesquelles ce travail ne peut être entrepris à l'université où l'étudiant est inscrit, et c) une justification concernant le choix de l'endroit où la recherche/les cours seront entrepris; 5) un budget pour le projet proposé; 6) dates prévues pour le voyage et date pour laquelle la bourse sera requise.

La demande devra aussi être accompagnée: 1) d'un C.V. complet mis-à-jour; 2) d'une lettre de recommandation du directeur de thèse; et 3) lorsque convenable, une lettre d'appui d'un administrateur de l'institution que le candidat désire fréquenter.

#### **Évaluation**

La valeur scientifique de chaque demande sera évaluée par un comité qui aura l'option d'envoyer des demandes spécifiques pour évaluation par un lecteur externe, expert dans le domaine. Un rapport écrit, contenant une critique constructive, faisant ressortir les aspects positifs et négatifs de la demande, sera retourné à chaque candidat.

#### **Échéances et Procédures**

Les formulaires de demande, qui peuvent être obtenus du Secrétaire de la Société, doivent être remplis et retournés pour le **15 janvier 1994** au Secrétaire de la Société. Le comité évaluera toutes les demandes pour le 30 avril 1994 et déterminera si, et à qui, les bourses seront décernées. Les candidats choisis seront contactés immédiatement, cela afin d'allouer suffisamment de temps pour les préparatifs nécessaires à un départ possible à l'automne. La bourse doit être utilisée dans les 12 mois suivant l'octroi.

Les récipiendaires devront préparer un court rapport final, en plus d'une liste détaillée de leurs dépenses, dans les trois mois suivant le voyage. Tout argent non dépensé devra être remis à la Société.

## **Pestcon Graduate Scholarship. Support of Postgraduate Work in Pesticide Research**

The Pestcon Graduate Scholarship has been established from the surplus funds generated by the VIth International Congress of Pesticide Chemistry held in Ottawa, Canada in August 1986. The Scholarship is open to Canadian students (including landed immigrants) for graduate study in any area of pesticide research including alternative pest control strategies. The Scholarship is tenable for a period of twelve months and has a value of approximately \$3,000. One Scholarship is awarded each year and may be held simultaneously with other scholarships, fellowships or awards.

Applications must be submitted in writing before **March 1** of each year, along with a curriculum vitae and brief description (500 words or less) of the research project undertaken and the progress to date. Applications must also be accompanied by an official transcript of the academic record of the candidate. Applicants must also include the name and address of their supervisor and one other person whom they have asked to provide a confidential assessment of their ability to conduct research. The name of the Scholarship holder will be announced prior to June 1, unless the Selection Committee feels that no suitable candidate exists. Payment of the Scholarship will be made in two instalments, October 1 and January 1, on notification from the supervisor that the student is making satisfactory progress.

The Scholarship is administered by The Chemical Institute of Canada. All applications should be submitted to: Program Manager, Student Affairs, The Chemical Institute of Canada, Suite 550, 130 Slater Street, Ottawa, Ontario, K1P 6E2

## **Smithsonian Research Fellowships**

The Smithsonian Institution announces its research fellowships for 1993-1994. Smithsonian fellowships are awarded to support independent research in residence at the Smithsonian in association with the research staff and using the Institution's resources. Proposals for research in the following areas may be made: Animal behaviour and pathology, ecology, environmental studies, evolutionary biology, marine biology, natural history, paleobiology, systematics, and tropical biology. Deadline: **15 January 1994**.

Postdoctoral Fellowships are offered to scholars who have held the degree or equivalent for less than seven years. Senior Fellowships are offered to scholars who have held the degree of equivalent for seven years or more. The term is 3 to 12 months. Both fellowships offer a stipend of \$25,000 per year plus allowances. Predoctoral fellowships are offered to doctoral candidates who have completed preliminary course work and examinations. The term is 3 to 12 months. The stipend is \$14,000 per year plus allowances. (These stipends are prorated for periods of less than twelve months.)

Graduate student fellowships are offered to students to conduct research in association with research staff members of the Smithsonian. Students must be formally enrolled in a graduate program of study, have completed at least one semester, and not yet have been advanced to candidacy if in a Ph.D. program. The term is 10 weeks; the stipend is \$3,000.

Awards are based on merit. Smithsonian fellowships are open to qualified individuals without reference to race, colour, religion, sex, national origin, age, or condition of handicap of any applicant.

For more information and application forms, please write: Smithsonian Institution, Office of Fellowships and Grants, 955 L'Enfant Plaza, Suite 7000, Washington, D.C. 20560. Please indicate the particular area in which you propose to conduct research and give the dates of degrees received or expected.

## UPCOMING MEETINGS / RÉUNIONS À VENIR

### **Eastern Spruce Budworm Research Work Conference**

April 14-16, 1994, St. John's, Newfoundland

A comprehensive review of on-going spruce budworm research and showcase of possible research avenues with respect to sustained development, integrated resource management, and environmental concerns.

CONTACT: Arthur Raske, Canadian Forest Service, P.O. Box 6028, St. John's NF, Canada A1C 5X8; Tel. (709) 772-4826; Fax. (709) 772-2576; Internet: araske@vax1.nefc.forestry.ca

### **International Conference on Ecology and Environment**

June 20-24, 1994, Drake Bay, Península de Osa, Costa Rica

CONTACT: Celso Vargas, Departamento de Computación, ITCR, Aptdo 159, Cartago, Costa Rica, Fax (506) 51 53 48, email: vargase@bitnet.ucrvm2 or vargase@earn.ucrvm2 or José Castro, Apartado 7137-1000 San José, Costa Rica.

### **Third International Congress of Dipterology**

August 15-19, 1994, Guelph, Ontario, Canada

CONTACT: Dr. S.A. Marshall, Chair, ICD3, Department of Environmental Biology, University of Guelph, Guelph, Ontario, Canada, N1G 2W1.

### **5th European Congress of Entomology**

August 29 - September 2, 1994, University of York, England

CONTACT: IFAB Communications, Institute for Applied Biology, University of York, York YO1 5DD, UK. Tel. +44 (0)904-432940; Fax. +44 (0)904-432917.

### **XX International Congress of Entomology**

August 25-31, 1996, Palazzo dei Congressi, Florence, Italy

CONTACT: Organizing Secretariat, OIC, Via A. La Marmora, 24, 50121 Florence, Italy  
Fax. ++39-55-5001912

## MISCELLANEOUS

### **Available to Dedicated Lepidopterist**

A "good home" required for one fragile copy of *Memoir of the American Museum of Natural History*. New Series Volume III Part 1. Illustrations of the North American Species of the genus *Catocala* by Wm.Beutenmuller, with additional plates and text by W.M.Barnes and J.McDunnough. October 1918. pp.47 plus 22 plates, 17 of which are coloured (artist, Mr.S.Fred Prince). It is 35cm x 25.5cm and soft cover. For more information please contact E. Belton via email c/o PeterBelton@sfu.ca.

### **Biting Insect Attractant Database**

A bibliographic database on *insect attractants research and development* is available free-of-charge on the InterNet using Gopher. The bibliography can be found at the University of Minnesota Gophers, in the College of Natural Resources Gopher, on the Forestry Library Gopher. Comments and questions are requested. Send response to Dr. Daniel J. Dobbert, MMCD, 2099 University Ave. W., St Paul MN 55104-3431. Tel. (612) 645-9149; Fax. (612) 645-3246.



Humorous and accurate Entomological drawings available as posters, Christmas cards and Hasti-notes-with envelopes; 15 designs available. Rear of cards have ident. key to species. Please write: Barry Flahey, P.O. box 298, Manotick, Ontario, Canada, K4M-1A3.

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