
ENTOMOLOGICAL SOCIETY OF CANADA

Bulletin



SOCIÉTÉ DES ENTOMOLOGISTES DU CANADA

Vol. 19

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No. 1



Entomological Society of Canada
Société des Entomologistes du Canada

Bulletin

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R. B. Aiken: Bulletin Editor

Cover Design: M. A. Sydor

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SEPTEMBER BULLETIN

This notice is directed at those wishing to submit material to the Bulletin for the September issue. I will be doing field work in Alberta from May through August, 1987. Anyone wishing to submit material for the September Bulletin (Deadline — July 15, 1987) should send it to me, c/o Bev Mitchell, Assistant Bulletin Editor, Department of Entomology, University of Alberta, Edmonton, Alberta, T6G 2E3.

GUEST EDITORIAL

WHY THE ESC?

Faced with the first significant decline in membership in many years, some of us are wondering why. At a time when support for entomology, particularly research entomology, is declining, we need the strength that numbers can give. It seems that many people choose not to be members because they are not fully aware of what the Society does. Our Editor believes it would be wise to review what it does and I agree.

Publications and Meetings

Everybody who dabbles in entomology knows that the ESC publishes the Canadian Entomologist and the Memoirs. The Society also meets every year so members can hear and present papers while making it possible to establish important contacts. Many think that is just about all. I think these are the most important activities of the Society, but why should I belong if year after year I can't get to the meetings and the Can. Ent., which contains only four papers a year relevant to my work, is in the nearby library? The reason is twofold. Firstly, we cannot maintain control of our scientific publishing activity with a small membership base. If I want to support the ESC's publishing activity but my shelf space is limited, I can donate my subscription by just asking. Secondly the Society does far more than publish the Can. Ent. and hold annual meetings, so that is what the Editor wants me to write about.

Political Activity

What else does the Society do? In my opinion the most important activity is combatting the complacency about research that is allowing the Canadian government to cut already inadequate support for research and development. The ESC works directly, and through the Biological Council of Canada to influence MPs, Ministers of the Crown, and Parliamentary Committees. We are discovering that governments, if not individual parliamentarians, are frequently insensitive to facts and logic, but they do understand votes, so we will have to appeal to the public as we have never done before.

Influence

The Society has considerable influence on the direction of entomological work in Canada because of its respected lack of provincial, federal, industrial, academic, or any other kind of bias. To this end it has conducted, usually with outside financing, studies of entomological manpower, education, economics of insect control in six crops to date and is preparing a seventh.

It conducted a pilot study for a biological survey of the insects of Canada in 1977-78 that has matured into a continuing Biological Survey of Canada (Terrestrial Arthropods) and is now preparing to add modules of other taxonomic groups. It has recently participated in interagency meetings called, in part at the urging of ESC, by Agriculture Canada to examine the status of and to make recommendations on IPM (Sault Ste. Marie 1985) and biological control (Winnipeg 1986).

The Society prepared a policy statement "Population Limitation and Resource Use" (1970), a special report entitled "Microbial Insecticides in Canada: Their Registration and Use in Agriculture, Forestry and Public and Animal Health" (1986), and is currently negotiating a contract with the federal Department of Agriculture to conduct a study of the economics of insects affecting livestock. Other studies conducted were on benefits and costs of controlling destructive insects on wheat, corn and canola (1986), and on onions, apples and potatoes (1983), environmental disturbance as it relates to insects (1984), human resources in entomology (1983), status and research needs of Canadian soil arthropods (1982), entomological education in Canada (1981-82), a catalogue of collections of Canadian insects (1978), list of workers in systematics and faunistics (1977), pesticides and the environment (1970), and others. Most of these reports are the results of detailed studies of the state of things with recommendations for action or change. They have resulted in changes in education, research, and policies. The Society, not having a direct responsibility for these matters, has credibility as an independent body with a comprehensive overview.

Education

The Scholarship Fund currently provides two \$2000 scholarships annually for graduate studies while keeping the capital intact. Prizes are awarded for student papers at annual meetings. Support at the amateur level is weak, and the Society needs enthusiastic people who are prepared to spend time in the general area of public education. Through regional affiliates, \$200/year/region is available, but regrettably it is not all being used.

International Congress

The 18th International Congress of Entomology is being held in Vancouver in 1988 at the invitation of the ESC. It would be nice if everybody could go and help. Just by being members of ESC, we can provide at least financial strength to make the Congress a great success. This is over and above the strength that numbers give in influencing public and official attitudes towards insects, faunistics, pesticides, the environment, support and direction of research, and ultimately our own self esteem.

Services

There are many other activities, as the committee reports published annually in the Bulletin testify. Our Heritage Committee saves documents and artifacts and supports P. W. Riegert's work on profiles of Canadian entomologists. The Society keeps a list of laboratory colonies of insects and mites for the convenience of colleagues who may wish to start subcultures. It also keeps a list of common names of insects and related arthropods, and attempts to make order out of the coining and use of such names. The Science Policy Committee is continually studying research and development activity wherever it may be done and identifying areas of neglect relevant to Canadian needs. The Employment Committee attempts to bring prospective employers and employees together, particularly at annual meetings. The Society recently decided to accept an invitation to cooperate with the Canadian Phytopathological Society in preparing a joint publication on diseases and insect pests of fruits and vegetables.

This editorial is obviously directed at the wrong people because non-members don't receive the Bulletin. Therefore I suggest that each member describe these activities to prospective members and solicit their membership. An easy way would be to photocopy these pages and give it to the prospective member. Explain what a bargain the \$45 membership and \$25 student membership fees are (most professional societies charge twice as much or more), and tell them all they have to do is send their money and make known their intentions to the Treasurer at 1320 Carling Ave., Ottawa K1Z 7K9. They may subsequently be asked if they wish to receive the Memoirs for a price and donate to the Scholarship Fund. Unless they donate their subscription, the Can. Ent. should start arriving toute de suite, including back issues to January of the paid-up year. You don't know if your colleague is a member or not? Don't assume anything, ask now.

D. Eidt
Maritimes Forestry

ENTOMOLOGICAL SOCIETY OF CANADA

36TH ANNUAL GENERAL MEETING

Holiday Inn South

Winnipeg, Manitoba

October 7, 1986

Minutes

President H. F. Madsen called the meeting to order at 1530 hours. There were approximately 70 members in attendance.

1. *Notice of Meeting*

Notice of this meeting was published in the December issue of Volume 17 and in the March and June issues of Volume 18 of the Bulletin.

2. *Additions to the Agenda and Approval of Agenda*

J. A. Shemanchuk moved and R. G. H. Downer seconded that the agenda as amended be accepted.

Carried.

3. *Deceased Entomologists*

A moment of silence was observed in memory of George Pearson Holland, Leslie A. Lyons, James Allen Beal, Alfred Wilkes, Charlie J. S. Fox, and Ryuichi Matsuda.

4. *Minutes of 35th Annual General Meeting*

J. C. Conroy moved and D. Craig seconded that the minutes of the 35th Annual General Meeting as printed in the March 1986 issue (Volume 18) of the Bulletin be adopted.

Carried.

5. *Business Arising from the Minutes*

There was no business arising from the minutes.

6. *Report from the Governing Board*

President H. F. Madsen presented a report which will be published in the Bulletin. H. F. Madsen moved and J. A. Shemanchuk seconded that the President's report be accepted.

Carried.

7. *Report from B.C.C.*

Dr. R. Nursall, representative from B.C.C., presented a report outlining the organization and function of B.C.C. as an umbrella organization for biologists in Canada. He pointed out that lack of funds impose severe constraints on B.C.C. achieving its goals. Dr. Nursall solicited the full support of the Entomological Society of Canada members.

8. *Auditors Report*

D. E. Bright reported that the Auditor's report was published in the December 1985 Bulletin (Volume 18).

D. E. Bright moved and E. C. Becker seconded that the Auditor's report as printed be accepted.

Carried.

9. *Elections Committee Report*

J. A. Shemanchuk read the Election Committee Report. Those elected were:

For Second Vice-President:

D. C. Eidt

For Directors-At-Large:

N. J. Holliday, I. M. Smith

For Fellowship Committee:

R. F. Morris, A. G. Robinson

J. A. Shemanchuk moved and J. C. Conroy seconded that the Election Committee Report be accepted and the ballots destroyed.

Carried.

10. *Installation of Officers*

President H. F. Madsen turned the gavel and chair over to G. G. E. Scudder as the incoming President of the Society. The new President thanked H. F. Madsen for his service to the Society and asked S. B. McIver to escort D. C. Eidt, the Second Vice-President, to the dias.

11. *Service Awards*

G. G. E. Scudder presented service awards to H. F. Madsen, Past-President, and E. C. Becker, former Treasurer. Members of the Society acknowledged these awards with hearty applause.

12. *Appointment of Auditor*

D. E. Bright moved and H. Danks seconded that McCay, Duff, and Company be retained by the Society as Auditors for 1986.

Carried.

13. *Resolutions*

G. G. E. Scudder asked R. H. Gooding to present the resolutions on behalf of the Society.

"Whereas the 36th Annual Meeting of the Entomological Society of Canada held in conjunction with the 42nd Annual Meeting of the Entomological Society of Manitoba has been a profitable and enjoyable experience for the participants and whereas the success of the meeting has been largely due to the efforts and dedication of the organizers, be it resolved that the Entomological Society of Canada and participants extend a vote of thanks to: Neil Holliday, Chairman, Joint Annual Meeting Committee; John Conroy, Chairman, Local Arrangements Committee; and George Gerber, Chairman of Scientific Program; and to the other members of these committees, and that thanks be extended to the Holiday Inn South for excellent and courteous accommodations, and to the City of Winnipeg and the Winnipeg Art Gallery for the mixer and to the Government of Manitoba and Agriculture Canada for the banquet and to the many sponsors for their generous contributions."

R. H. Gooding moved and Paul Albert seconded that the Resolutions Committee reported be accepted.

Carried.

14. *Other Business*

14.1 *Changes to Standing Rules*

J. A. Shemanchuk moved and G. Gerber seconded that the Standing Rule II regarding payment of Dues be made as follows:

1. Annual dues for direct Regular Membership shall be forty-five dollars (\$45.00) **if paid by January 1** (1 January 1987).
2. Annual dues for Student Membership shall be twenty dollars (\$20.00) **if paid by January 1**, (1 January 1987).
3. No change.
4. (a) If dues are not paid by **the first day of January**, the rights and privileges of membership shall be suspended and the member's name shall be removed from the mailing list.
(b) Reinstatement may be effected by paying the dues **plus an administrative fee of five dollars (\$5.00)** by the end of December of the same year.
Changes are underlined.

Carried.

15. *Notice of 37th Annual Meeting of ESC*

15.1 37th Annual General Meeting of the ESC will be held at Penticton, British Columbia at the Delta Lakeshore Hotel on September 29, 1987.

- 15.2 *Future Annual General Meetings*
1988 — Vancouver in conjunction with the 18th International Congress of Entomology.
1989 — St. John's Newfoundland in conjunction with the Acadian Entomological Society.
1990 — Laval University in conjunction with B.C.C. Congress.
1991 — Alberta in conjunction with the Entomological Society of Alberta.
16. The 36th Annual General Meeting adjourned at 1630 hours on a motion by P. W. Riegert, seconded by J. McNeil.
Carried.

GOVERNING BOARD MEETING

October 4-5, 1986

Holiday Inn South, Winnipeg, Manitoba

Actions

1. *Finance Committee*

- (1) Executive Council Meeting to be scheduled for the weekend to take advantage of reduced air fares.
- (2) Computer for the Scientific Editor office has been rented at a favorable rate.
- (3) Recommendations on ways to reduce publication costs from managing editor were referred to the Publications Committee for evaluation and action.
- (4) Authorized President to contract out editing of the backlog of Memoir manuscripts.

2. *Bulletin Editor*

- (1) Instructed Bulletin Editor to prepare a timetable for receiving items.
- (2) Instructed Editor to investigate and proceed with procedures to reduce costs of printing the Bulletin.

3. *Profiles of Entomologists*

Approved the cost of producing Profiles of Entomologists to one-half of the cost of production.

4. *Canadian Phytopathological Society Publication*

- (1) ESC to proceed and combine efforts with Canadian Phytopathological Society to produce a book or books on diseases in insect pests of fruits and vegetables.

5. *Public Education Committee*

- (1) Changes to guidelines regarding Public Education Grants were approved.

6. *By-Laws, Rules, and Regulations Committee*

- (1) Recommended to the Annual Meeting Membership to accept an amendment to the Standard Rules regarding payment of membership dues.

7. *Award Nominations*

- (1) Instructed the President to appoint an Ad Hoc Committee with 2nd Vice President as chair to investigate the procedures for nomination, documentation, selection, etc. for C. Gordon Hewitt and Gold Medal Awards and prepare a report to Executive Council.

8. *B.C.C.*

- (1) J. McNeil was nominated representative to the B.C.C. Congress Planning Committee.
- (2) Re-affirmed participation of the ESC in the B.C.C. Congress at Laval in 1990.

GOVERNING BOARD MEETING

October 8, 1986

Holiday Inn South, Winnipeg, Manitoba

Actions

1. *Executive Council*
Approved the Executive Council for 1986-87 as proposed: G. G. E. Scudder, President; H. F. Madsen, Past President; E. C. Becker, First Vice-President; and D. C. Eidt, Second Vice-President.
2. *Trustees*
Approved the trustees for 1986-87 as proposed: D. E. Bright, Treasurer; A. B. Ewen, Scientific Editor; R. Aiken, Bulletin Editor; and J. A. Shemanchuk, Secretary.
3. *Committees and Representatives*
Approved Committees and Representatives for 1986-97 as proposed by the President: A list will be published in the Bulletin.
4. *Budget*
Approved a budget for 1987 as presented by the Treasurer.
5. *Bulletin Printing Costs*
Governing Board agreed without motion that the Bulletin Editor proceed with changes to the Bulletin cover and proceed with procedures to reduce printing costs.
6. *Student Involvement on Governing Board*
Student involvement on Governing Board was referred to the By-Laws, Rules, and Regulations Committee.
7. *Bilingualism in the Society*
Approved appointment of an Ad Hoc Committee to prepare recommendations for implementation of bilingualism within the Society.
8. *Employment Committee*
Agreed to review the purpose and function of the Employment Committee and bring in recommendation to next Annual Meeting.
9. *Next Executive Council Meeting*
Next meeting of Executive Council will be in April 1987.
10. *Next Governing Board Meeting*
Announced that the next Governing Board Meeting will be held at the Delta Lakeshore Hotel, Penticton, B.C. on September 26-27, 1987.
11. *Next Annual General Meeting*
Announced that the next Annual General Meeting will be held at the Delta Lakeshore Hotel, Penticton, B.C. on September 29, 1987.

MEETING NOTICES

Executive Council Meeting

The mid-term meeting of the Executive Council will be held April 25-26, 1987 at the Embassy West Motor Hotel, 1400 Carling Avenue, Ottawa. Matters for consideration at the meeting should be sent to the Secretary, Mr. J. A. Shemanchuk, Agriculture Canada Research Station, P.O. Box 3000 Main, Lethbridge, Alberta, T1J 4B1.

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Réunion de l'Exécutif-Conseil

Avis

La réunion mi-semestre de l'Exécutif-Conseil aura lieu le 25-26, avril 1987 à l'Hôtel Embassy West Motor, 1400 avenue Carling, Ottawa. Tous sujets pour être considérés devront être soumis au secrétaire de la Société, M. J. A. Shemanchuk, Station de Recherches, Agriculture Canada, C.P. 3000, Lethbridge, Alberta, T1J 4B1.

37th Annual General Meeting

The Annual General Meeting of the Entomological Society of Canada will be held on September 29, 1987, at the Delta Lakeshore Hotel, Penticton, B.C. The date and time will be announced in the June Bulletin.

Matters for the consideration of this meeting or for the Governing Board meeting, to be held on September 26-27, 1987, in Penticton, B.C., should be sent to the Secretary, Mr. J. A. Shemanchuk, Research Station, Agriculture Canada, P.O. Box 3000, Lethbridge, Alberta, T1J 4B1.

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37^e Réunion Générale Annuelle

La Réunion Générale Annuelle de la Société Entomologique du Canada aura lieu le 29 septembre à l'hôtel Delta Lakeshore, Penticton, B.C. Le lieu et l'heure précis sera annoncé dans le Bulletin de juin.

Le conseil de direction sa réunira le 26-27 septembre 1987. Tous sujets pour être considérés devront être soumis au secrétaire, M. J. A. Shemanchuk, Station de recherches, Agriculture Canada, C.P. 3000, Lethbridge, Alberta, T1J 4B1.

1987 ANNUAL MEETING

Entomological Society of Canada Entomological Society of British Columbia Washington State Entomological Society

28-30 September 1987
Delta Lakeside Hotel
Penticton, British Columbia

Tentative Schedule

September 26:	09:00-17:00	— ESC Governing Board Meeting
September 27:	09:00-17:00	— ESC Governing Board Meeting — Afternoon Field Trip — President's Reception
September 28:	09:00-16:30	— Opening Ceremonies — ESC Awards — Gold Medal Address — Plenary Lecture — Feature Symposium — Graduate Students meet the Governing Board
	19:30	— Wine and Cheese Reception
September 29:	08:00-09:00	— ESBC Business Meeting
	09:00-16:30	— Submitted Papers
	16:30-18:00	— ESC Business Meeting — WSES Business Meeting
	18:30	— Banquet — Awards — Fellows, Criddle Student Paper Competition
September 30:	09:00-12:00	— Submitted Papers
	12:00-13:30	— Governing Board Meeting
	13:30	— Submitted Papers — Special Interest Groups — Field Trips/Tours

The feature symposium on 28 Sept. is entitled "Pheromones — From the lab bench to the field." Participants will include W. Burkholder, R. Byers, L. McDonough, C. Oehlschlager, T. Payne, C. Sanders and I. Weatherston.

COMMITTEES OF THE ENTOMOLOGICAL SOCIETY OF CANADA

Proposed Members for 1986-87

Nominating

H. F. Madsen (Chairperson)	(604) 492-7674	Summerland
R. Forbes		Vancouver
P. J. Albert		Montreal

Elections

M. Isman	(604) 228-3929	Vancouver
R. Forbes		Vancouver
R. A. Cannings		Victoria

Fellowship

S. R. Loschiavo (Chairperson)	1987	Winnipeg
R. W. Stark	1987	Portland
D. G. Harcourt	1988	Ottawa
D. C. Eidt	1988	Fredericton
R. F. Morris	1989	St. John's
A. G. Robinson	1989	Winnipeg

Achievement Awards

D. C. Eidt (Chairperson)		Fredericton
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Annual Meeting (1987)

N. Angerilli (Chairperson)		Summerland
R. D. McMullen (Co-Chairperson - Program)		Summerland
J. Cossentine (Co-Chairperson - Local Arrangements)		Summerland
R. A. Cannings (Regional Director - E.S. British Columbia)		Victoria

By-Laws, Rules and Regulations

G. Wylie (Chairperson)		Winnipeg
G. K. Bracken		Winnipeg
G. Gerber		Winnipeg

Employment

No appointment

Finance

H. V. Danks (Chairperson)	1987 (613) 998-9262	Ottawa
V. Behan-Pelletier	1987	Ottawa
A. C. Schmidt	1988	Ottawa
H. J. Teskey	1988	Ottawa
D. Barnes	1989	Toronto
I. M. Smith	1989	Ottawa

Heritage

P. W. Riegert (Chairperson)	(306) 584-4224	Regina
A. M. Harper		Lethbridge
J. S. Kelleher		Ottawa

Insect Common Names and Cultures

E. M. Belton (Chairperson)	(604) 420-3181	Burnaby
A. G. Robinson (E.S. Manitoba)		Winnipeg
J. S. Kelleher (E.S. Ontario)		Ottawa
G. B. Neill (E.S. Saskatchewan)		Indian Head
J. R. Spence (E.S. Alberta)		Edmonton
P. D. Syme (E.S. Ontario)		Sault Ste. Marie

L. S. Thompson (Acadian E.S.)
P. Benoit (E.S. Quebec)

Charlottetown
Quebec

Membership

N. Holliday (Chairperson)
T. D. Galloway (E.S. Manitoba)
J. R. Spence (E.S. Alberta)
P. G. Mason (E.S. Saskatchewan)
H. B. Specht (Acadian E.S.)
B. Roitberg (E.S. British Columbia)
D. J. Madder (E.S. Ontario)

Winnipeg
Winnipeg
Edmonton
Saskatoon
Kentville
Burnaby
Lindsay

Public Education

J. D. Shorthouse (Chairperson)
D. F. Hilton
K. Pivnik
J. Conroy (E.S. Manitoba)
I. Otvos (E.S. British Columbia)
R. Jaques (E.S. Ontario)
P. W. Riegert (E.S. Saskatchewan)
D. L. Larson (Acadian E.S.)
P. P. Harper (E.S. Quebec)
J. R. Spence (E.S. Alberta)

Sudbury
Lennoxville
Saskatoon
Winnipeg
Victoria
Harrow
Regina
St. John's
Montreal
Edmonton

Publications

M. Mackauer (Chairperson) 1987 (604) 291-4808
D. LaFontaine 1987
A. Thomson 1987
A. Maire 1987
G.C.D. Griffiths 1987
W. J. Turnock 1988
D. R. Oliver 1988

Burnaby
Ottawa
Victoria
Trois Rivieres
Edmonton
Winnipeg
Ottawa

Scholarships

R. H. Gooding (Chairperson) (403) 432-3929
G. Bracken (E.S. Manitoba)
L. Safranyik (E.S. British Columbia)
J. R. Spence (E.S. Alberta)
R. H. Storch (Acadian E.S.)
D. B. Smith (E.S. Ontario)
R. Elliott (E.S. Saskatchewan)
D. Coderre (E.S. Quebec)

Edmonton
Winnipeg
Victoria
Edmonton
Orono
Stony Creek
Saskatoon
Montreal

Science Policy

E.C. Becker (Chairperson) (613) 996-1665
S. B. Hill (AASC)
O. N. Morris
N.D.P. Angerilli
G.G.E. Scudder
J. D. Shorthouse (Public Education)

Ottawa
Ste. Anne de Bellevue
Winnipeg
Summerland
Vancouver
Winnipeg

Biological Council of Canada

E. C. Becker (613) 996-1665
D. C. Eidt

Ottawa
Fredericton

*International Association on Water Pollution
Research and Control (CNC/IAWPRC)*

E. Scherer (204) 949-5004/5

Winnipeg

AASC

S. B. Hill (514) 457-2000

Ste. Anne de Bellevue

COPSE

S. B. Hill (514) 457-2000 Ste. Anne de Bellevue

Insect Losses — Phase 2

G. H. Gerber (Chairperson) (204) 269-2100 Winnipeg
C. R. Ellis Guelph
J. F. Doane Saskatoon
E. C. Becker Ottawa

Study Team

M. Stemeroff Guelph
D. J. Madder Guelph

*Biological Survey of Canada
(Terrestrial Arthropods)*

Scientific Committee

G. E. Ball (Chairperson) (403) 432-5487 Edmonton
G. W. Argus (NMNS) Ottawa
V. M. Behan-Pelletier Ottawa
K. G. Davey York
J. A. Downes Ottawa
A. Finamore Edmonton
A. Francoeur Chicoutimi
A. R. Emery (Director NMNS) or delegate Ottawa
G. Gibson Ottawa
P.-P. Harper Montreal
D. K. McE. Kevan Ste. Anne de Bellevue
D. J. Larson St. John's
P. G. Mason Saskatoon
R. Ring Victoria
G.G.E. Scudder (President ESC) Vancouver
I. M. Smith Ottawa
B. Trottier (director BRI) or delegate Ottawa
G. B. Wiggins Toronto
D. D. Williams West Hill

Secretariat

H. V. Danks (613) 998-9262 Ottawa

SCHOLARSHIP WINNERS — 1986

Sandra Graham

Sandra was born in Heidelberg, West Germany and lived in Ontario, British Columbia and West Germany before graduating from high school in Winnipeg. She completed her BSc Honours at the University of Manitoba and was awarded the David Ian MacKenzie Medal for top standing in Honours Zoology.

The summer of 1986 was spent as a research assistant at the University of Manitoba and during this time began to appreciate the importance of insects as experimental systems. Recently she began an MSc research project under Dr. Huebner and plans to work on cellular aspects of reproduction in *Rhodnius prolixus*.

Susan Fraser

Susan received awards in Latin, science and overall academic achievement when she graduated from grade 13 at Alliston, Ontario. She entered the co-operative education program at the University of Waterloo. During her work terms she was employed by the Ontario Ministry of the Environment at Rexdale, ON., the Biology Dept. of MacMaster University and the Canadian Forestry Service (C.F.S.) at Sault Ste. Marie. In May 1986, she graduated with an Honours BSc and was placed on the Dean's Honour List. The J. R. Mathew Prize for the highest marks in 3rd and 4th year Biology was awarded to her and she received a 1986-87 NSERC postgraduate scholarship.

It was while working at the C.F.S. that she was first introduced to the fascinating insect world. Her interests in entomology include reproductive biology, mating and foraging behavior and population ecology. Her master's research program is being conducted under Dr. Stephan Smith in association with the C.F.S. and will focus on aspects of the host-searching behaviour of a spruce budworm parasitoid, *Apanteles fumiferanae*. Once completed, she would like to pursue a PhD, studying an agricultural insect pest.

POSTGRADUATE AWARDS 1987

Invitation for Applications Entomological Society of Canada

The Entomological Society of Canada will offer two postgraduate awards of \$2,000.00 each to assist students beginning graduate study and research leading to an advanced degree in entomology. The awards will be made on the basis of high scholastic achievement.

Eligibility. The successful applicants must be either Canadian citizens, or landed immigrants with Bachelor degrees from Canadian universities. Applicants must begin their first year of postgraduate studies between June 15, 1986, and December 15, 1987. The studies and research must be carried out at a Canadian university. Each award is conditional upon certification by the Department Head that successful applicants have been accepted into the first year of a program of study and research for an advanced degree with full graduate status. A student who was unable to gain admission or enters a graduate school as a qualifying candidate is not eligible to receive an award.

Method of Application. Applicants should submit a properly completed form, with supporting documents, in accordance with the instructions printed on the application form. Applications must be received by the Secretary of the Society no later than **June 15, 1987**.

Process of Selection and Award Presentation. Applications are reviewed by a committee of the Society and announcement of the two winners will be made at the annual meeting of the Society and each winner will receive a certificate. Payment of the award will be made in January 1988.

Regulations

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

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

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

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

Mr. J. A. Shemanchuk, ESC Secretary
Canada Agriculture, Research Station
Lethbridge, Alberta
T1J 4B1

BOURSES POUR ÉTUDIANTS POST-GRADUÉS 1987

Société Entomologique du Canada

Avis

La société Entomologique du Canada offrira deux bourses d'un montant de \$2,000.00 chacun pour aider des étudiants entreprenant des études post-graduées et recherches en préparation d'un diplôme supérieur en entomologie. Les bourses seront accordées aux étudiants ou étudiantes en raison des seuls critères de réussite académique.

Éligibilité. Les candidats choisis doivent être citoyens canadiens ou résidents reconnus du Canada avec un baccalauréat d'une université canadienne. Il est aussi obligatoire que les candidats commencent leur première année d'études post-graduées entre 15 juin, 1986 et 31 décembre, 1987, et que les études et les recherches soient faites à une université canadienne. Chaque bourse ne sera accordée que lorsque le Chef du Département vérifie que les candidats choisis ont été acceptés en première année d'un programme d'études et de recherches en vue d'un diplôme supérieur avec tous les privilèges rattachés au status d'étudiants post-gradués. Un étudiant qui n'a pas pu obtenir son admission à une Ecole de Gradués ou qui s'inscrit en vue de compléter l'obtention de crédits n'est pas éligible pour recevoir une bourse.

Formalités de la demande. Les candidats devront soumettre leur candidature à l'aide du formulaire approprié et y ajouter tous les documents requis sur la formule de demand. Les demandes devront être reçues par le Secrétaire de la Société au plus tard le **15 juin 1987**.

Sélection et présentation de bourses. Le choix sera fait par un comité de la Société et l'annonce des deux candidats choisis se fera à la réunion annuelle de la Société où ils recevront un certificat. Paiement de la bourse aura lieu en janvier 1988.

Règlements

Autres sources de revenus. Un boursier pourra dans de circonstances normales donner des séances de cours ou de démonstrations jusqu'à un maximum de 200 heures par année pourvu que le chef de son département en exprime le désir et considère que ces tâches additionnelles n'iront pas à l'encontre du progrès de l'étudiant. Sauf pour fins de démonstration et les jours de congé, un boursier devra consacrer tout son temps à l'étude et à ses recherches et n'accepter aucune autre rémunération, mais pourra jouir d'une autre bourse ou d'un prix.

Transferts. Une bourse est accordée pour poursuivre des études du 2^e ou 3^e cycle conduisant à l'obtention d'un degré en entomologie au Canada. Les boursiers qui décideront de changer d'orientation pour d'autres disciplines que l'entomologie ou de transférer à une université hors du Canada peuvent se voir retirer leur bourse. Après acceptation d'une bourse, tout changement dans le programme d'études ou déplacement vers une autre université devra recevoir au préalable l'approbation du Comité de la Bourse de la SEC. Une telle demande doit être accompagnée de documents provenant de Chefs de Départements concernés.

Frais supplémentaires. Une bourse consiste en un montant total. Il n'y a pas d'autres formes de prix accordés par la Société. Des frais supplémentaires pour assister, par exemple, aux réunions scientifiques, ou pour frais de cours, publications, etc., ne sont autorisés pour aucune raison.

Toute correspondance relative aux bourses et toutes demandes pour formulaires doivent être adressées à:

Mr. J. A. Shemanchuk, secrétaire SEC
Canada Agriculture, Research Station,
Lethbridge, Alberta
T1J 4B1

NOMINATIONS POUR MEMBRES HONORAIRES

La Société a des places vacantes pour de nouveaux membres honoraires. Veuillez envoyer les nominations au président du comité de membres. Les nominations peuvent être envoyées en tout temps, mais, afin que les personnes nommées soient élues en 1987, le président devrait recevoir les nominations avant le 20 mars 1987.

Toute nomination doit être accompagnée par un sommaire biographique d'une ou deux pages, donnant les points saillants des accomplissements de la personne nommée, qui contribuent au fait que cette personne soit considérée comme candidat(e) à la nomination de membre honoraire.

N. J. Holliday, président
Comité de membres, SEC
Département d'Entomologie
Université du Manitoba
Winnipeg, Manitoba
R3T 2N2

NOMINATIONS FOR HONORARY MEMBERS

The Society has vacancies for new honorary members. Please forward nominations to the Chairperson of the Membership Committee. Nominations may be forwarded at any time, but, in order for nominees to be elected in 1987, nominations should reach the Chairperson by 20 March 1987.

All nominations must be accompanied by a one or two page biographical sketch, highlighting those accomplishments that contributed to the nominee being considered for honorary membership.

N. J. Holliday, Chairperson
Membership Committee, ESC
Department of Entomology
University of Manitoba
Winnipeg, Manitoba
R3T 2N2

Ecological Collections and Long-Term Monitoring

by

H. V. Danks, G. B. Wiggins, and D. M. Rosenberg

Biological Survey of Canada (Terrestrial Arthropods)

Introduction

Ecological collections that document species present at a given time and place allow habitat changes over time to be monitored. Although some voucher specimens and faunal assemblage collections are held by various organizations in Canada, there is no national, standardized provision for such collections. As impacts on natural environments raise increasingly serious problems, this deficiency ought to be remedied. The Biological Survey of Canada (Terrestrial Arthropods) recently considered possible guidelines for ecological collections, and the ideas developed are summarized in this article in order to make them available more widely.

Ecological collections contain invaluable data that document biotic and habitat change. They are important in a long-term context, and are especially relevant to some recent concerns, such as how the biological effects of expected climatic change or the impact of acid rain might be assessed. Sound scientific principles support the concept of such collections.

Two main elements are required for initiation and establishment of properly based ecological collections. First, collections of assured value can be obtained only on the basis of detailed practical protocols for site selection, sampling, and subsequent maintenance of the collections. Second, means are required to ensure that permanent support will be available for such an undertaking, which is necessarily of very long term.

General principles

In order to interpret long-term environmental changes, the biota needs to be documented in given places, and at different times over a long interval. Much of the information from earlier sampling is lost unless collections are permanently available to document the species then present; these collections can also be used to improve identifications later as knowledge increases, and to resolve particular problems with earlier identifications. Such problems are a common occurrence in work on arthropods because the group is so diverse. At the same time, however, arthropods are especially valuable for assessing changes, because their diversity reflects a wide range of ecological roles (Rosenberg et al. 1986). In addition, specific attention to long-term collections ensures that they are properly associated with particular sites that can then be re-sampled, validating the reality of any perceived change.

Collections obtained and maintained in order to document habitat conditions in time and space serve as resources for the future. They are national repositories of considerable long-term importance for evaluating biotic changes, and deserve attention and support commensurate with such importance.

Practical basis

How, then, should the work of acquiring ecological record collections be done? Collections would be obtained from specific habitats of interest and kept according to these habitat associations, rather than following the taxonomic arrangement of a general collection. Protocols for the work could be defined further through the additional reconnaissance and analysis allowed by a specific project. Decisions therefore are required about:

1. Choice of sites
2. Sampling procedures
3. Housing of collections
4. Funding for all phases
5. Nature of a trial project used to define further protocols

1. *Choice of sites*

- a. *Habitat type*: The most suitable candidate habitats would have some of the following features:
 - i Limited general variability in conditions, so that longer term changes might be more easily seen. For example, habitats with buffered temperature regimes (e.g. deep lakes, springs).
 - ii Particular sensitivity to environmental change. For example, systems with abundant lichens (sensitive to air pollution).
 - iii Pre-existing interest in the habitat(s) by agencies of government.
- b. *Site location*: Favoured sites would have some of the following features:
 - i Easily accessible for sampling
 - ii Discrete and hence readily recognized for repeated sampling (careful protocols would be needed in many habitats to ensure site constancy).
 - iii Likelihood of protection from artificial changes (e.g. parks, preserves; sites large and therefore buffered from surrounding artificial influences). Sites for long-term ecological research have already been provided for elsewhere (e.g. Callahan 1984). As well, specific sites with particular probability of exposure to extreme artificial environmental changes (e.g. waterways near industrial developments) might be chosen.
- c. *Number of sites*
 - i "Replicates" of a given habitat type would be desirable, but the intensity of effort would depend on other factors.

2. *Sampling procedures*

Detailed methods (including the number, size and frequency of samples at a given site) would be expected to depend on individual habitats, and other factors. However:

- a. A sampling programme must be designed specifically with long-term monitoring in mind. Information should be collected for the purpose of such monitoring, using simple reproducible methods, with the same care as any other primary research project. This implies in particular that occasional "spot samples" are not useful; a more rigorous approach is needed. Several past attempts to assess change merely used any available information "left over" from other primary uses.
- b. The methods used would be kept constant over time to eliminate one potentially important source of variability. Much previous long-term work has been deficient because of alterations in the methods used during data collection. Standardization of techniques is critical to effective long-term work.
- c. Sampling might emphasize specific groups that would provide data of particular interest to the project as a whole because of their biology, state of taxonomic knowledge, etc.

3. *Housing of collections*

Decisions are required about:

- a. *Location of collections*. For continuity and accessibility, federal and provincial governments should be encouraged to establish **permanent** repositories for ecological collections, which should be held in one or a few major locations. Collections maintained in several locations could be accessed through a central clearing-house for information on ecological collections. It might be possible to encourage the development or designation of one institutional repository in each province (or group of provinces or territories), in accordance with the Biological Survey's recommendations on regional (taxonomic) collections and the concept of regional centres (Danks 1981).
- b. *Collection management and facilities*. Maintaining collections associated with habitat information is very labour intensive. Adequate staff, collection storage, and data-processing capabilities would all be required to maintain quality and accessibility. The selectivity of habitats and sites sampled (chosen on scientific grounds as outlined above) would prevent unbridled growth of the collections and maintain the quality of material: ecological reference collections should never become a routine dumping ground for unsorted mass collections of varying provenance. However, existing ecological collections of particular historical importance should be brought into the system.

4. Funding

- a. *Long-term core funding.* Any scheme for ecological collections would only be worthwhile if long-term funding to ensure the integrity of the collections is guaranteed. This suggests that the organization would have to be placed in a government department with a mandate for long-term studies on the Canadian biota. Nevertheless, given relatively modest core funding of this sort, additional support could be obtained from various sources to carry out sampling, identification, etc., in particular habitats of interest. The core funding would allow for curation and maintenance of the collections themselves.
- b. *Project funding through fixed protocols.* Funding could also stem from any active monitoring or assessment project if suitable protocols were developed and adopted: for example, funds for housing and curating collections should be an integral part of every study begun as environmental monitoring; and outside agencies might be funded only on condition that the recommended protocols are used and the collections placed in the designated repository.

5. Nature of trial project

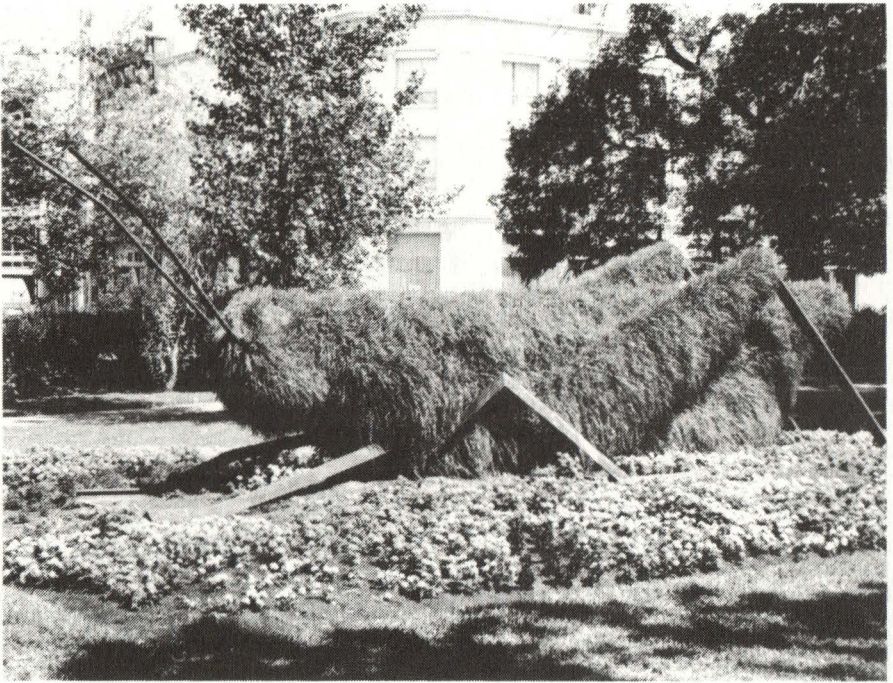
The most feasible trial projects would be those carried out in connection with known or anticipated changes and thus oriented in a clear conceptual framework. Two candidate trial projects — monitoring for climatic change and for artificially produced changes in water quality — would be especially valuable because the importance of these undertakings seems so fundamentally sound that the collection would be an essential and logical corollary to the study. Either project could be used to demonstrate a need for collections to maintain an ecological record, and the results would support the more general case for such collections. Many previous longer-term projects have suffered from an emphasis on earlier phases such as sampling, and a neglect of the later phases such as preservation of collections (Rosenberg et al. 1979).

Long-term developments

These discussions logically would lead to a national reference collection of habitat data. Established within a federal agency, for example, an ecological collection would operate according to protocols established by a trial study that included discussion among interested parties. Such a centre would require its own staff and additional resources. The proposal might even require the participation of all biologists, not just entomologists, to be successful, though it is the diversity of insects that makes it especially relevant for that group. Among federal agencies, the National Museum of Natural Sciences already has a mandate for the acquisition and dissemination of basic knowledge on the biota. The idea of properly established long-term ecological collections would reinforce such a mandate by applying it to an important ecological and sociological concern.

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- Callahan, J. T. 1984. Long-term ecological research. *BioSci.* 34: 363-367.
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- Rosenberg, D. M., H. V. Danks, J. A. Downes, A. P. Nimmo, and G. E. Ball. 1979. Procedures for a faunal inventory. pp. 509-532. In H. V. Danks (ed.), Canada and its insect fauna. *Mem. ent. Soc. Can.* 108. 573 pp.
- Rosenberg, D. M., H. V. Danks, and D. M. Lehmkuhl. 1986. Importance of insects in environmental impact assessment. *Env. Management* 10(6): 773-783.



Giant Grasshopper Settles in Regina Park

While collecting and photographing insects across the prairies last August, my family and I were delighted to discover this larger than usual grasshopper in Regina's Victoria Park. The grasshopper, affectionately named 'Reginald' by Regina residents, was designed by Wilf Perreault and serves as one of Canada's few insect monuments. The sod-covered grasshopper, measuring two metres high and eight metres long, was fabricated by City of Regina Parks and Recreation Department staff. Tradesmen welded together reinforcing rods to build the structure and horticultural staff 'planted' it with two cubic metres of soil and a covering of sod. The final effect was a three-dimensional 'living' grasshopper, a truly unusual and appropriate addition to a Saskatchewan flowerbed.

J. D. Shorthouse,
Department of Biology,
Laurentian University,
Sudbury, Ontario, P3E 2C6

NEWS OF ORGANIZATIONS

Biological Council of Canada

The fall meeting of BCC was held October 23-24, 1986 at the University of Ottawa. President Ralph Nursall chaired the meeting attended by representatives of all seven BCC member Societies (Can. Soc. of Plant Physiologists, Genetics Soc. of Can., Can. Botanical Assoc., Entomological Soc. of Can., Can. Phytopathological Soc., Can. Soc. of Zoologists, Can. Council of Univ. Biol. Chairmen) and three observers (Can. Council of Univ. Field Stations, Can. Soc. of Microbiologists, Can. Soc. of Environmental Biologists). Items covered at the Thursday business meeting included activities at the AGM of each Society and planning for the 1990 BCC Congress at Laval on May 27-30, 1990. Program details will be brought to Council at its spring meeting by Program Organizer Dr. Joel de la Noue, but planning for Society events is progressing well. An evening reception for the Councillors and invited political and government guests permitted informal discussions of matters of public policy critical to the individual Societies.

Friday's meeting consisted of presentations by invited guests of issues of importance to Canadian biology. Ms. Janet Halliwell, Director — NSERC Operating Grants Program, discussed the Government's Matching Funds Policy (MFP) and NSERC Program reviews. The final MFP document will be made public before the end of 1986, but the rules for its implementation by the research Councils remains with each Council. To date, NSERC has yet to finalize its policy, but this will involve discussions with the universities as to how best to obtain these funds. These comments on MFP were echoed by discussions with Bob Rand (Finance) and Allan Cobb (MOSST). Even if all matching funds become available to NSERC, programs must be modified because the total money available will barely match current expenditures at expected inflation rates, far less meet the goals of the 5 year plan. A committee has prepared a document concerning program changes, and Universities and scientific societies including the BCC will be asked to respond to its content. Other changes are expected at NSERC as further belt-tightening occurs.

A good discussion of lobbying efforts was led by Dr. Clement Gauthier, Chairman of the National Consortium of Scientific and Educational Societies, which is the outlet by which BBC does lobbying. He discussed the key points of the Throne Speech affecting universities and the upcoming February lobby of MPs. These discussions led to BCC establishing a Science Policy Committee, chaired by Dr. Gray Merriam (Dept. of Biology, Carleton University, Ottawa). The committee will be seeking the assistance of BCC member Societies for lobbying items and responses to critical science policy issues. The committee is expected to be pro-active rather than simply reactive which will require a major effort and close liaison with Societies. Contact Gray with your ideas and assistance. Certainly individuals can have a major impact on local MPs in these critical issues which we must all face.

Drs. Digby McLaren (Pres.-elect) and Michael Dence (Exec. Sec. Designate) of the Royal Society of Canada presented an informative talk on Global Change. This concept evolved from the International Geosphere-Biosphere Program and workshops will be organized across Canada by the Royal Society dealing with Global Change. The BCC will monitor this program closely and inform its member Societies where and when input can be made. This program will have a major impact on our thinking in the future.

Many other programs were discussed and reviewed by Council including the Canadian Council on Ecological Areas and the Youth Science Foundation. Your BCC representatives will be kept informed of all activities of the BCC in these areas and others, and you should contact your Society Executive for more information. As this was Dr. Nursall's last meeting as BCC President, the Council extended a vote of appreciation to him for his commitment to the BCC; Dr. John McNeill, Dept. of Biology, University of Ottawa is the new BCC President.

Entomological Society of Alberta

During its thirty-fourth Annual General Meeting on Nov. 8, 1986, the Entomological Society of Alberta passed the following motion: "That the Entomological Society of Alberta donate \$2000.00 to the Organizing Committee of the XVIII International Congress of Entomology."

Support for the motion was broadly based among entomologists from various sectors; the motion was made by a provincial employee (Hugh Philip) and seconded by a retired federal employee (Jim Drouin) and an academic (Bev Mitchell).

A number of arguments for making the donation were put forward; basically they all amount to recognition of the importance of the Congress to Entomology in general and to Entomology in Canada in particular.

Our Society is well aware of the fact that our donation represents only a small portion of what will be required to finance the Congress but we hope that it comes at a time when it will be most useful. We also hope that other entomological societies and organizations will see fit to follow the lead of the Entomological Society of Canada and the Entomological Society of Alberta in making early donations to the Congress in an effort to assure the success of the Congress.

R. H. Gooding
President
Entomological Society of Alberta

Director for Termite Control Project

Early in the new year, the eastern subterranean termites that are now chewing their way across Toronto will have a determined adversary.

Ken Grace, currently completing his Ph.D. at the University of California, Berkeley, has been chosen director of a new, \$1.5 million termite control research project in the University of Toronto's Faculty of Forestry. His appointment begins in January.

The research team's work is being funded by grants from the Canada Mortgage and Housing Corporation and the municipalities of Etobicoke, Guelph, North York, Scarborough, Toronto and Dresden. Other sponsors are expected to contribute funds in the near future.

Mr. Grace's work at Berkeley consists of analyzing the chemical pheromone that controls termite behavior, particularly their sense of direction. Such a pheromone could be used to lead termites in a particular direction, i.e., to poisoned bait.

The battle against termites is becoming critical as the insects spread into new areas, while, at the same time, public opposition mounts against the continued use of possibly dangerous insecticides.

Contact: Ken Grace, Department of Entomological Sciences, University of California, Berkeley, California 94720 (415) 642-5806

Rod Carrow, Dean, Faculty of Forestry, University of Toronto, 978-5752

Martin Hubbes, Faculty of Forestry, University of Toronto, 978-4644

Bob Bonner, Deputy Commissioner, Department of Buildings and Inspections, Toronto City Hall, 392-7501

The Biological Survey of Canada (Terrestrial Arthropods) Survey Report

The Scientific Committee met in Ottawa in Ottawa on 23-24 October 1986. A fuller account of the meeting appears in the Spring 1987 issue of the Newsletter of the Biological Survey of Canada (Terrestrial Arthropods).

Notes on selected scientific projects

1. *Arthropod fauna of the Yukon*

The deadline for first manuscripts for the Survey's major volume on the Yukon and its fauna has been deferred until 1987, allowing further taxonomic contributions to be included.

2. *Arthropods of Canadian grasslands*

Another Grasslands Newsletter has been published, and is available from the Survey Secretariat.

3. *Arthropods of peatlands*

Sampling techniques, to allow for comparison among habitats, are being refined. A symposium on peatland faunas will take place in a few years.

4. *Insect dormancy*

The Survey's book on insect dormancy has been published as the first of the Biological Survey of Canada's monograph series, and is available from the ESC (Danks, H. V. 1987. *Insect dormancy: an ecological perspective*. Biological Survey of Canada (Terrestrial Arthropods), Ottawa. ix + 439 pp.)

Other scientific priorities

1. *Climatic change*

The Committee decided to proceed toward a workshop climatic change and the distributions of species. Appropriate scientific content and logistics for the workshop are being arranged.

2. *Environmental Impact Assessment*

The Committee's paper on Environmental Impact Assessment has now been published. (D. M. Rosenberg, H. V. Danks, and D. M. Lehmkühl. 1986. Importance of insects in environmental impact assessment. *Environmental Management* 10(6): 773-783).

3. *Ecological collections*

A Survey document on the requirements for long-term ecological collections (used to monitor habitat change over time and to make essential material available to future biologists) was submitted for publication in the ESC Bulletin to make it available to a wider audience (see this issue).

Secretariat activities

The 1986 round of visits to entomological centres across the country by H. V. Danks was completed after the meeting. In addition to useful informal discussion and exchange of ideas at the centres visited, Dr. Danks presented seminars and lectures on various topics.

Liaison and exchange of information with other organizations

Recent developments in the National Museum of Natural Sciences, The Biosystematics Research Centre, the Entomological Society of Canada, the Inland Waters Directorate, the Canadian Botanical Association, and the Committee on Systematics Resources of the Entomological Society of America were outlined by representatives present at the meeting. Mr. C. G. Gruchy, Assistant Director of the NMNS, outlined protocols established for the Museum's collection of insects, including a focus on non-North American insects and on those groups that do not have beneficial or detrimental activities in respect of agriculture.

Dr. R. Trottier, recently appointed Acting Director of the Biosystematics Research Centre upon Mr. Mulligan's retirement, looked forward to even closer cooperation between the Centre and the Biological Survey.

The Committee agreed to write to Macdonald College to suggest measures that would ensure the safety of the priceless Lyman entomological collection during a proposed move.

The Committee remains in touch, both formally and informally, with the Committee on the Status of Endangered Wildlife in Canada, the Canadian Committee on Ecological Areas, the Natural Sciences and Engineering Research Council of Canada, and other bodies.

Other items

Other items discussed by the Committee included Survey-related activities in various regions, the production and recognition of Survey publications, the value of the ESC memoirs as a publication avenue for Survey symposia, the XVIIIth International Congress of Entomology (Vancouver 1988), ways in which the Committee could provide appropriate advice to other agencies, and replacements for those members of the Committee retiring by rotation.

H. V. Danks

International Commission on Zoological Nomenclature

ITZN 59

18 December 1986

The following Opinion has been published by the International Commission on Zoological Nomenclature in the *Bulletin of Zoological Nomenclature*, volume 43, part 4 on 11 December 1986:

Opinion No

1418 (p. 325) *Glyphipterix* Hübner, [1825] (Insecta, Lepidoptera): *Tinea bergstraesserella* Fabricius, 1781 designated as type species.

ITZN 11/5

18 December 1986

The following applications have been received by the Commission and have been published in volume 43, part 4, of the *Bulletin of Zoological Nomenclature* (11 December, 1986). Comment or advice on them is welcomed and should be sent c/o The British Museum (Natural History), London, England. Comments will be published in the *Bulletin*.

Case No

- 2426 *Lycaena mirza* Plötz, 1880 (Insecta, Lepidoptera): proposed conservation by the suppression of *Lycaena mirza* Staudinger, 1874.
- 2574 *Paraphytomyza* Enderlein, 1936 (Insecta, Diptera): proposed designation of *Phytogromyza luteoscutellata* de Meijere, 1924 as type species.
- 2447 *Heriaeus* Simon, 1875 (Arachnida, Araneida): request for confirmation of *Thomisus hirtus* Latreille 1819 as type species.
- 2560 *Simulium austeni* Edwards, 1915 (Insecta, Diptera): proposed precedence over *Simulia posticata* Meigen, 1838.
- 2394 *Simulia ferruginea* Wahlberg, 1844 (Insecta, Diptera): proposed precedence over *Simulia rufa* Meigen, 1838 and *Simulia borealis* Zetterstedt, 1842.
- 2575 *Tribolium castaneum* (Herbst, 1797) (Insecta, Coleoptera): proposed conservation by the suppression of *Tribolium navale* (Fabricius, 1775).
- 2438 *Cornalatus* Attems, 1931 (Diplopoda, Polydesmida): proposed designation of *Cornalatus permutatus* Attems, 1938 as type species.
- 2561 *Opius Wesmael* 1835 (Insecta, Hymenoptera): proposed designation of *Opius pallipes* Wesmael, 1835 as type species.
- 2572 *Leptura marginata* Fabricius, 1781 (Insecta, Coleoptera): proposed conservation by the suppression of *Leptura marginata* O.F. Müller in Allioni, 1766.

P. K. Tubbs

Canadian Plains Research Center

Many of your Association members may be interested in knowing about the CANPLAINS Data Base.

Unlike other bibliographic databases which are primarily single subject oriented, the CANPLAINS Data base is interdisciplinary and has a regional focus. It contains over 24,000 references to publications and current research about the Canadian prairie region, especially its cultural and natural history, its land, its environment, its problems and proposed solutions.

The CANPLAINS Data Base is available for searching across Canada on the CAN/OLE online information retrieval system operated by CISTI. CAN/OLE can be accessed through most libraries or by individuals with user numbers.

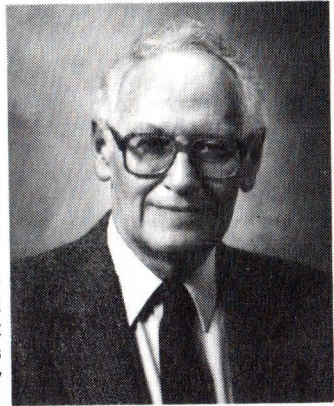
If any members of the Entomological Society of Canada are doing prairie relevant research and wish to be registered in the data base they may contact me at the Canadian Plains Research Center for more information.

University of Regina
Regina, Saskatchewan, Canada S4S 0A2
Telephone: (306) 584-4758/59

Carol MacDonald
Database Manager

PERSONALIA

Retirement Jerry Weintraub



Jerome (Jerry) Weintraub retired from the Animal Parasitology Section, Agriculture Canada Research Station, Lethbridge, on October 17, 1987, after thirty-seven years of service.

Jerry began his career in Veterinary-Medical Entomology in 1949, when he accepted a position at the Canada Department of Agriculture, Livestock Insects Laboratory at Kamloops, B.C. His duties were to conduct investigations on warble fly ecology and physiology. In addition, Jerry assisted in investigations in tick ecology.

In 1953, Jerry was transferred to the Livestock Insects Laboratory at Lethbridge, continuing studies on warble fly ecology and physiology. Jerry is recognized as a world's authority on warble fly ecology and physiology. Results from his work and his leadership have been applied to a large-scale Canada/U.S. cooperative project on eradication of warble flies and he influenced scientists of the U.S., U.K., and France. Jerry was selected by CIDA to conduct an expert evaluation in Pakistan of a request for aid for warble control programs.

Jerry has presented results from his research work to international symposia and conferences. As a recognized world authority on warble flies, he presented a lead paper at a recent Workshop on Livestock Insects at East Glacier, Montana. He co-chaired a symposium and presented a lead paper on warble fly ecology at the VIIth Conference of the World Association for Advanced Veterinary Parasitology.

Jerry was an active member of the Western Committee for Livestock Insects and has served as chairman of this committee for one term. He was a member of the western forum and the Alberta Warble Control Advisory Committee. Jerry provided expertise to Alberta Agriculture, Alberta Environment, chemical companies, producer and meat packer organizations on warble fly control, and on biological and chemical control of manure-breeding flies.

Jerry is a member of the Entomological Society of Alberta, where he served as President, Vice-President, Editor, Librarian, and Program Committee Chairman. He is a member of the Entomological Society of America and the Canadian Society of Zoologists.

Jerry and Anne plan to live in Lethbridge.

C. P. ALEXANDER FUND

The Entomological Society of Canada received a bequest from the estate of the late Dr. Charles P. Alexander, a noted taxonomist of crane flies. It was his wish that interest earned by the money be used in support of publications.

The Governing Board established the C. P. Alexander Fund and decided that a portion of the interest earned be used to support annually the publication of one or more invited articles or reviews. The following guidelines were prepared by the Publications Committee and approved by the Executive Council of the Board at its mid-term meeting on 22-23 April 1986:

"The Entomological Society of Canada may publish annually one to three invited reviews in *The Canadian Entomologist*.

Invitations to prepare a review will be issued by the Publications Committee on the recommendation of the Scientific Editor, who shall have final authority over the selection of topics. Preference will be given to reviews that broaden the scope of *The Canadian Entomologist* and/or to topics of current significance to Canadian entomology.

Review articles must conform to all relevant publication guidelines of *The Canadian Entomologist*, except that articles normally should not exceed 20 printed pages.

The Scientific Editor shall have the right to review, or have reviewed, an invited article and to demand changes in accordance with normal editorial standards. The Scientific Editor shall also have the right to withdraw an invitation if a potential author falls to meet an agreed-upon deadline for submission of the completed manuscript; however, in no case shall this deadline be less than 12 months from the date of the invitation.

The Entomological Society of Canada will provide each author (or joint authors) with 100 free reprints of the review and waive all page charges. Costs of the free reprints and all page charges will be paid from interest accrued in the C. P. Alexander Fund, as determined by the Treasurer.

Support from the C. P. Alexander Fund shall be acknowledged in a footnote to the title, or in some other suitable form.

The Publications Committee, on the recommendation of the Scientific Editor, may consider for support from the C. P. Alexander Fund uninvited articles and/or reviews that satisfy the above terms of reference."

Further information may be obtained from the Scientific Editor, Dr. A. B. Ewen, and the Chairman of the Publications Committee, Dr. M. Mackauer. Suggestions for review articles should be addressed to the Scientific Editor.

M. Mackauer
Chairman, Publications Committee

BOOK REVIEWS

Matthews, E. G. and Kitching, R. L. 1984. *Insect Ecology (2nd ed.)*. Australian Ecology Series [vii + 211 pp + 6 pp colour plates (paperback)]. University of Queensland Press (5 South Union Street, Lawrence Ma. 01843 U.S.A.) U.S. \$15.95.

The objective of the first edition of the book was to describe the general principles and common patterns which underlie the varied roles insects play in different ecosystems and to complement other existing books on the ecology of Australian insects. In the second edition, the contents have been added to rather than radically altered and a new chapter has been added to provide an introduction to insect populations. This book, as part of the Australian Ecology Series, is designed for two rather different groups: those wishing to broaden their understanding of ecology (university students, teachers, interested public, conservationists, foresters, agriculturists, etc.) and ecologists interested in Australia and the ecological research done there. As an introduction to insect ecology, this book exposes the reader to an interesting selection of principles and examples that should stimulate an interest in further reading. Given the brevity of the treatment of general principles of ecology, a specific bibliography of ecological texts would have helped to direct such a reader to a broader and deeper appreciation of the subject. For an ecologist interested in Australian insects and their adaptations to the special habitats of the sub-continent, the book is pleasant, informative, and provides enough references to follow up on some of the intriguing relationships that have been described. In general, the book is well written but the authors are annoyingly inconsistent in defining technical terms. As examples, the readers are deemed able to understand "the rate of gene flow", "tropic levels", "autoallelopathy", "oligecty", "stasipatric" and "agistment" without definition but require definitions of "phytophagous", "vagility", "dioescism" and "mycorrhizae". Nevertheless, for non-Australian, this book provides a pleasant and useful introduction to the insect ecology of an unique area.

W. J. Turnock
Agriculture Canada Research Station
Winnipeg, Manitoba

Hinds, Harold R., 1986. *The Flora of New Brunswick*. Primrose Press, Fredericton, New Brunswick. xxvii + 460 pp. + 119 plates + 85 pp. of maps. Available from the author at the Biology Department, University of New Brunswick, Bag service 45111, Fredericton, N.B. E3B 6E1. Price \$30.00.

This book will be useful to entomologists concerned with the distribution of insects on vascular plants in New Brunswick, because of the drawings of 1449 species, 1020 distribution maps and notes on habitats. It will also be useful to people concerned with the flora of adjacent parts of Maine, Quebec, Nova Scotia, and Prince Edward Island.

D. C. Eidt
Canadian Forestry Service
Fredericton, N.B.

MEETINGS

Fruit Symposium

In commemoration of the official opening of the new research facilities at the Agriculture Canada Research Station, Summerland, British Columbia, a symposium will be held at the station on April 28-29, 1987. The title of this symposium is "Fruit Production, Protection and Utilization in Arid Regions: Progress Through Imaginative Research".

A prominent North American entomologist has been invited to discuss new research developments in tree-fruit entomology and make some predictions about future discoveries in insect control. The symposium program will include lectures on other disciplines related to fruit production, protection, and utilization, and will also provide ample opportunity to tour the new facilities. There will be a published proceedings.

For further information contact Dr. Norman Looney at (604) 494-7711.

Annual Meeting of the Society for the Preservation of Natural History Collections on 31 May to 3 June at Redpath Museum/McGill University.

CONTACT: Ingrid Birker, Redpath Museum/McGill University, 859 Sherbrooke St. West, Montréal, Qué. H3A 2K6. (514) 392-5997

35th Annual Meeting of The North American Benthological Society on 2-5 June 1987 at The University of Maine (Orono).

CONTACT: Dr. C. F. Rabeni, Co-op Fishery Research Unit, 112 Stephens Hall, University of Missouri, Columbia, Missouri, U.S.A.

Society for the Study of Evolution, Annual Meeting on 21-24 June 1987 at Bozeman, Montana.

CONTACT: Dr. R. G. Harrison, Department of Biology, Yale University, New Haven, Connecticut, U.S.A. 06511-7444

The Biosystematics of Haematophagous Insects, an international symposium on 29 June to 2 July 1987 at the Liverpool School of Tropical Medicine. Registration fee £25, Students £10.

CONTACT: Dr. M. W. Service, Liverpool School of Tropical Medicine, Pembroke Place, Liverpool L5 5QA. England

XVth International Congress of Genetics on 20-27 August in Toronto, Ontario.

CONTACT: Mr. Laurier Forget, Office of Conference Services, National Research Council, Ottawa, Ontario, Canada. K1A 0R6

XVI Pacific Science Congress at Seoul, Korea on 20-30 August, 1987.

CONTACT: Prof. Choon Ho Park, Secretary-General, Organizing Committee, XVI Pacific Science Congress, Seoul, 1987. K.P.O. Box 1008, Seoul 110, Korea.

Joint Annual Meeting of the Entomological Society of Canada, Entomological Society of British Columbia and Washington State Entomological Society on 28-30 September 1987 at the Delta Lakeside Hotel, Penticton, B.C.

CONTACT: Dr. N. Angerilli, Agriculture Canada, Research Station, Summerland, B.C. V0H 1Z0.

XVIII International Congress of Entomology, at the University of British Columbia, Vancouver, B.C., on 3-9 July 1988.

CONTACT: Dr. G.G.E. Scudder, Secretary General, XVIII International Congress of Entomology, Department of Zoology, University of British Columbia, Vancouver, B.C. V6T 2A9. Telephone (604) 228-3168.

Whitefly Workshop

On April 13 and 14, 1987 Agriculture Canada is organizing a Workshop on Whitefly, sponsored by Flowers Canada Ontario. Our objective for these two days will be to gain knowledge of the biology and taxonomy of whitefly species in greenhouses or ornamental and vegetable plants. We will also define research priorities and propose short and long term control strategies for whitefly. Researchers and extension personnel from across Canada and 4 key researchers from the U.S.A. have been invited to attend.

On Monday, April 13, we will have an informal exchange of information and ideas by the researchers, extension and pesticide regulatory personnel. This will be followed Tuesday by a more formal program of presentations to industry representatives. Topics to be covered include: biology, taxonomy, ornamental and vegetable hosts, IPM strategies — biological, chemical and other controls of whitefly. On Wednesday, April 15, tours of local greenhouses will be arranged for those interested.

Further information may be obtained by contacting: Bruce Broadbent, Agriculture Canada, Vineland Research Station, Vineland Station, Ontario L0R 2E0 (416) 562-4113.

EDITOR'S REMARKS

1. To repeat the announcement in the front of the Bulletin, all submissions and correspondence concerning the Bulletin's September issue (deadline — 15 July 1987) should be sent to the care of the Assistant Bulletin Editor — Bev Mitchell.
2. Since this issue represents a full year that I have been Bulletin Editor, I think it only appropriate to thank a few people who have made this job far less of a chore than it may have been.

Our printer, Ray Hignell and his staff in Winnipeg. They have dealt with later insertions, desperate phone calls and manuscript copy that defies description with great aplomb and efficiency.

The Society members, committee chairs and executives who regularly provide me with the necessary bits of Society business, reports, book reviews, articles etc.

Finally, a special thanks to Dr. J.-G. Godin and Miss K. Eakins of Mount Allison University for checking and translating necessary articles into French (and for supressing their snickers at my own attempts to do so).

Ron Aiken
Bulletin Editor

BULLETIN COVER CONTEST

As I perused my own issue of the December 1986 Bulletin, I realized that the deadline for submissions of artwork for the cover contest was a little unrealistic (i.e. ridiculous). The **new** deadline for new cover designs will be **May 31, 1987**. Any submissions sent after May 1, 1987 should be sent to me care of Bev Mitchell at the University of Alberta.

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Contributions and correspondence regarding the Bulletin should be sent to: R. B. Aiken, Department of Biology, Mount Allison University, Sackville, N.B. E0A 3C0. Telephone (506) 364-2509. Inquiries about subscriptions and back issues should be sent to the Entomological Society of Canada, 1320 Carling Avenue, Ottawa, Ont. K1Z 7K9.

Bulletin Deadline

The deadline for the next issue, Vol. 19, no. 2 is April 15, 1987.

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