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ENTOMOLOGICAL SOCIETY OF CANADA

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# Bulletin

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VOLUME 2

NUMBER 1



**ENTOMOLOGICAL SOCIETY OF CANADA**

**1969-1970**

**President:** E. J. LeRoux

**Secretary:** D. G. Peterson

**President-elect:** W. F. Baldwin

**Treasurer:** E. G. Becker

**Past-president:** A. S. West

**Editor:** D. P. Pielou

**PAGINATION CHANGE**

For convenience in future referencing, a system of annual volumes is being adopted, within volumes, pagination will be continuous. Numbers one and two, with pages numbered separately, will constitute volume one; this number starts volume two.

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D. P. Pielou      Editor (Society Publications)  
 D. C. Eldt        Assistant Editor (Bulletin)

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## *Editorial*

At their mid-winter meeting held at Ottawa in late January, the Board of Directors decided that printing of the Bulletin should be arranged by the Bulletin editor, rather than by the Ottawa editorial office. They hoped to facilitate communication with the printer and lessen delays in publication. A change of printer means different methods and an obvious change of style. Hopefully you approve of the changes. Fledging isn't easy, and more changes may be necessary before a final plumage pattern evolves and we get truly airborne.

### EDITORIAL BIAS

A serious hazard in publishing a bulletin like this one, is that its coverage may be biased in favor of the location of its editorial offices. The Entomology Division Newsletter suffered this criticism, and the CBC still does. It's easy to just pick up the phone and call the local people — something has to be done when there is an empty space and nothing to fill it. Prevent regional bias, and send in news. If you have a pet idea or peeve, don't keep it in your coffee club — bring it out. Tell us the rationale of your scientific approach, politicize a little, build an empire, or even get cut down. If you've just completed a sabbatical, a secondment, or a WHO assignment, give us your impressions.

### CORRESPONDENTS

Since the last issue of the Bulletin a grapevine of correspondents has been set up across the country. All establishments with concentrations of entomologists have not yet got one, but it is hoped they soon will.

Because there are so many, it is not possible to write regularly to every correspondent. It is therefore hoped that we can keep them informed through the Bulletin.

Correspondents may send in material at any time, but the deadline for the next issue is 15 May. It would be appreciated if these were edited and typed as well as possible to save work at this end. Please provide good glossy prints of the finished size of any photographs you submit, because we do not have graphic facilities available to us here. Probably of more importance than news gathering, correspondents should watch for potential lead articles and solicit them. Contributions in French are welcome.

Would any correspondent who feels he cannot continue, please designate a successor.

Contributions and correspondence should be sent to: D. C. Eidt, Editor, Bulletin of the Entomological Society of Canada, P. O. Box 4000, Fredericton, N. B.

## LETTER TO THE EDITOR

Sir:

Bull. Ent. Soc. Can. No. 2 came today. I should like to compliment you and the Society on its existence and its quality.

However, I should like further to suggest regarding the excellent SEMicrograph (p. 24) that data be given regarding the instrument used and the conditions of preparation. I suspect it was a Stereoscan but I believe it important to know if it was metal coated — consider the elegant SEMicrograph on the cover of *Science* for 9 Jan. 70 which was not coated!

Also I would reply to Dr. Vickery (pp. 20-21) that the amateur entomologist is not a vanishing breed. I am one, I am, as is A. C. Sheppard, a charter member of the Lepidopterist's Soc., and I have had several insects named for me — including a Crambid by Klots.

I suggest, and have done so before, that progress in taxonomy might be assisted if the available supply of taxonomists were more conditioned to a willingness to do taxonomy and less strongly motivated also to do the biology and bionomics of their animals. This is the area in which I feel that the amateur can be of greatest service — he can look at the beasts in his area, collect them, forward them to the taxonomist, and thus aid the advancement of knowledge.

Bryant Mather

Box 631

Vicksburg, Miss. 39180, U.S.A.

Drs. Seabrook and Wilkes produced their scanning electron photomicrograph on a Cambridge Stereoscan. Fresh material, not freeze-dried was given a double coating of gold. — Ed.

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## NEW LABORATORY BUILDING OPENED

The new Canada Department of Agriculture Research Laboratory at Harrow was officially opened on November 7, 1969 by the Honourable Arthur Laing, Minister of Public Works for Canada, and the Honourable H. A. Olson, Minister of Agriculture for Canada. Over 400 invited guests witnessed the ceremonies and toured the building. A very successful open house for the public was held on the succeeding Saturday and Sunday.

The laboratory complex includes a two-storey research building interconnected with a single storey administrative wing and three service wings. Specialized facilities are provided for soil science and irrigation, plant physiology and biochemistry, weed science, plant breeding and genetics, plant pathology, entomology and nematology. This complexity of research facilities is in keeping with the requirements of the extensive and diversified nature of agriculture in southwestern Ontario.

W. H. Foott



OUR FILE NO. 19-5-4-1-2  
NOTRE DOSSIER NO.

NOTRE FILE NO.  
NOTRE DOSSIER NO.

DEPARTMENT OF FISHERIES AND FORESTRY  
CANADIAN FORESTRY SERVICE

MINISTÈRE DES PÊCHES ET DES FORÊTS  
LE SERVICE CANADIEN DES FORÊTS

CHEMICAL CONTROL RESEARCH INSTITUTE  
25 PICKERING PLACE  
DUSTBANE BUILDING  
OTTAWA 8, ONT.

To whom it may be of interest.

6th February, 1970.

Re: DDT Residue in Humans.

At the time of a recent minor operation, I had a sample of abdominal fat removed for the purpose of determining the presence of DDT and DDT breakdown products. I have been inordinately exposed to DDT since its first use in Canada in 1944, and I would guess that my exposure would be several hundred times that of an average citizen of Toronto.

The following shows the results of analysis of my tissue and for comparison there is no significant difference between these results and those from 50 (unfortunately deceased) citizens of Toronto. It appears the theory that a threshold of retention is soon reached and further exposure does not accumulate is probably valid, at least for abdominal fat.

Analyst -

Mr. W.B. Ritcey,  
Food and Drug Directorate,  
Division of Food Chemistry,  
Department of Health and Welfare.

Sample of J.J. Fettes' abdominal fat:-

pp' DDE	4.10 ppm
pp' DDT	1.60 ppm
op' DDT	0.11 ppm
pp' DED	0.07 ppm
Dieldrin	0.19 ppm
Heptachlor epoxide	0.04 ppm

James J. Fettes  
Director.

JJF/jd

## CANADIAN ENTOMOLOGIST 100 YEARS AGO

A society that is unaware of its own history is a society in difficulty. Hegel said something like that but the wisdom of the statement is often forgotten. To us the writings in the Canadian Entomologist of 100 years ago may sound funny, or stilted, or full of trivia, but look back and be amused, enjoy the eloquent style, see how we have progressed, see what we have lost, see what the men who laid the foundations of Canadian entomology were like. The entomologists of 100 years ago had quite a different outlook from that of the entomologists of today, and felt a stronger kinship with nature. Editors too were of a different breed, and permitted an individuality of style unheard of now. The changes themselves are not important; consider what they mean in terms of changing philosophy.

Consider the following editorial, and in view of "cost-benefit analysis" and "mission orientation", see how it relates to 1970.

To-day our Society enters with the New Year upon a new phase of existence. Hitherto it has been entirely dependant upon the unaided contributions and voluntary assistance of its members, who, in the very nature of things, are comparatively few in number, and scattered over a wide area of country; now it has received official recognition, and is furnished with such pecuniary aid as will enable it to carry out more effectually the work that it was intended to perform. We trust, then, that all our members will now bestir themselves, and work zealously and actively for the cause of Entomology in this country, and will show by their labours that the encouragement afforded them has been usefully and worthily bestowed. We have now made our first moult, but still continue in a larval state, with all a caterpillar's voracity for food; unless we get plenty we shall shrivel up and die. The sustenance that we require is more members, more work, more books, more specimens, more scientific contributions, more subscribers to our journal, more active co-operation on the part of all!

The author was probably the Rev. C. J. S. Bethune, who was editor in 1870. The pecuniary aid referred to was a grant of \$400 from the Council of the Agriculture and Arts Association of Ontario "on the condition that the Society furnish an Annual Report, and form a Cabinet of Insects useful or prejudicial to Agriculture and Horticulture, to be placed at the disposal of the Council, and that they also continue to publish their Journal." The report became the Annual Report of the Entomological Society of Ontario, and the "Cabinet of Insects" is housed at OAC where it continues to grow and serve students of entomology.

Now, latter day entomologists, with your electron microscopes, radioactive isotopes and computers, can you solve this problem?

### A SINGULAR CASE

Seeing in the last number of the Canadian Entomologist, a description of the eggs of *A. Luna*, reminds me to ask of you the explanation of a curious circumstance in the life-history of one bred by me from the larva last year. I will

premise that I am writing without my notes, and therefore cannot give figures accurately, but can give the facts. There may be nothing very strange about it, but two of the best entomologists in the United States inform me that it is entirely new to them. It is this:— Some time in the latter part of the summer of 1868 I took, feeding on walnut leaves, a mature larva of *A. Luna*; from which I did not hope to rear the mature insect, because I counted on the larva ver twenty eggs like those of a *Tachina*. Underneath some of these eggs I could discern with a lens a minute opening through which the fly-larva had entered the body of the *Luna* larva. The skin of the latter was more or less discoloured under each egg, but under some — under many in fact — there was a dense black spot, sometimes two lines in diameter. I made a slight incision in the skin of the *Luna* larva at the place where a *Tachina* larva seemed to have entered by one of the little holes, to see if I could find the *Tachina* larva. It was a very slight incision, as I did not wish to kill the *Luna* larva, but wanted to rear the flies from it to see if they were the same as those bred from *Soturnia lo*. Before it spun up it changed colour, becoming almost pink. It spun up, and to my surprise, instead of producing *Tachinae*, there last spring emerged from it an unusually large *Luna*. The question which puzzles me is, what became of the parasites? According to all the books, I believe, the entrance of the parasite into the body of its proper host is certain death. Could it have been that the parent *Tochina* made a mistake, and that its progeny, not finding the *Luna* to their taste, died or made their escape? Even if they had died inside the *Luna* larva, must they not have occasioned its death, especially considering the number of them?

I will add that there was no possibility of a mistake, as I had but one other *Luna* larva (and it had spun up before I found the infested one, and like it produced a perfect moth, though not so large as that from the infested one), and these were the only two *Luna* larvae and the only two *Luna* moths that I ever saw. I still have both. The infested larva was the last to spin up, but the first to emerge. Can you tell me what became of the *Tachinae*?

V. T. Chambers, C vington, Ky.

P.S. — Since the above was written, I have referred to my journal, and find that the first larva was taken on Sept. 2; the infested one on Sept. 4. The latter came out on May 6th, and the former on May 15th. Otherwise the facts are as above stated. — V.T.C.

Having had these samples, we intend to publish more to leaven the pages of future issues of the Bulletin. We hope you enjoy them.



## In Memoriam

### GEORGE WISHART 1896-1970



Canada has lost a prominent entomologist, conservationist, and community leader with the death of George Wishart in his 74th year, on the 23 February 1970 at the Belleville General Hospital. Though he had suffered from a heart condition for sometime, his last illness was brief.

Mr. Wishart was born at Carp, Ontario, a son of the late Mr. and Mrs. Alexander Wishart, and received his early education in that district. After graduating from the Aroprior High School in 1915, he obtained a teacher's certificate at the Ottawa Normal School and taught in Ottawa Valley schools until 1920, when

he entered the Ontario Agricultural College specializing in entomology. During the summers of 1922 and 1923 George worked for the Ontario Department of Agriculture. After receiving a B.S.A. in 1924, he was employed for a year by the United States Department of Agriculture, but was forced to resign because of illness. In 1927, he was appointed to the staff of the Entomology laboratory at Chatham, Ontario, to investigate the biological control of the European corn borer. The Chatham staff was moved to Belleville, Ontario, in 1929 where George was made responsible for all biological control projects on field and crop insects. After taking a leave of absence in 1934-35 to study for his Master's degree at Macdonald College, McGill University, George Wishart returned to the Research Institute, Belleville, where he developed special equipment and techniques for the propagation of parasites, host insects, and host plants. A constant temperature - humidity cabinet that he designed became standard equipment in Government and many Canadian university laboratories. He also played a major role in the design of air-conditioning and other specialized equipment in the quarantine laboratory constructed at Belleville in 1935 for research on potential biotic agents. The successful biological control of several species of insect pests can be directly attributed to the research work of George Wishart and his assistants.

In 1958, when the organization and the functions of the Research Institute at Belleville changed, George Wishart began a new and challenging field of research, the responses of insects to sound. It is a tribute to his ability and versatility that, with only 6 years of investigation in this field before his retirement on 28 December 1961 after 35 years of service, he received international recognition for the published results of this research.

During his entomological career, George Wishart was the author or co-author of 31 scientific papers published mainly in the Canadian Entomologist and the Proceedings of the Entomological Society of Ontario. He was a member of both the Entomological Society of Canada and of the Entomological Society of Ontario and was elected to the directorship of the latter Society

for the terms 1941-1942, 1945-1946, and 1950-1954. After his retirement George's interest in entomology did not wane: he is one of the authors of a paper entitled "Annotated List of Mosquitoes of South-Eastern Ontario" that is to be published in the 100th volume of the Proceedings of the Entomological Society of Ontario in 1970. This paper concerns the ecology, abundance, and behaviour of culicids and chaoborids in the Belleville area.

With conservation a subject uppermost in his mind, George Wishart was appointed to the Moira River Conservation Authority in 1958 and worked long and arduously both as a member and as its Chairman for several years. He was also a member of the Soil Conservation Society of America.

Besides his contribution to Canadian agriculture and conservation, Mr. Wishart found time to participate actively in community affairs. He helped to guide the education of the Belleville and District youth by serving as an appointed member of the Vocational Advisory Committee of the Belleville Board of Education from 1942-1944; as an elected member of this Board from 1945 to 1952 and as its Chairman in 1947; and as an elected member of the Quinte High School Board from 1952-1957 and as its Chairman in 1954.

In 1957, George resigned from this post when he was elected an alderman of the City of Belleville, a position which he held for 8 years. While an alderman he was appointed to the Belleville General Hospital Board of Governors by City Council and served for some years in this capacity. In 1958, he was elected a Director of the Belleville Children's Aid Society, one of his pet projects, and held offices on its executive. Mr. Wishart was an active member of the Canadian National Institute for the Blind for over 25 years, for which he received a special citation in 1968, and held all executive offices on the Hastings County Advisory Board of this organization, including being its Chairman for a number of terms. A member of Bridge Street United Church, Belleville, he was active in Church work and sang in its choir for some years. For service to his community, the Belleville Jaycees named him Citizen of the Year in 1965.

George Wishart, an avid trout fisherman, was a director of the Belleville and District Fish and Game Association. A true nature lover, he found time to enjoy gardening with his wife. Their garden has produced some of the prettiest flowers, the most delicious apples, and the tastiest vegetables in the neighbourhood. Mr. Wishart was a skilled woodworker and spent many happy hours making furniture and refinishing antiques acquired at local auction sales that Mrs. Wishart and he frequented, especially after his retirement.

To his friends, age was not a barrier. He will be missed and long remembered by the many children, youths, and adults who valued his friendship, gained much from his knowledge, and received solace, guidance and understanding from him in time of need.

George Wishart is survived by his wife, Lois Christina Kentley, of Montreal whom he married in 1929, three daughters (Lois Mary, Elspeth Ann, and Carol Emily) and five grandchildren. Also surviving are one brother, Jack, of Amprior and an adopted sister, Margaret (Mrs. Ralph Johnson), of Montreal.

Joan F. Bronskill

**20TH ANNUAL MEETING  
ENTOMOLOGICAL SOCIETY OF  
CANADA**

**FORT GARRY HOTEL — WINNIPEG,  
MANITOBA, AUG. 24, 25, 26 — 1970.**

**Come and help celebrate Manitoba's Centennial**

Two major symposia have been arranged:

*Insecticides, Past, Present and Future.*

*Ionizing Radiations in Entomology.*

Invited speakers will be in attendance from Canada, United States, and South America.

The first annual "Insect Photo Salon" sponsored by the Society is being arranged for this meeting also. For further details see your second notice or contact:

**M. A. Ashraff,  
Green Cross Products,  
P.O. Box 754,  
WINNIPEG 1, Manitoba**

Submitted papers are solicited. All papers will be allowed 20 minutes, including discussion. Slides for presentation are being limited to 2 x 2.

An outstanding program of social events has been arranged including a cruise on the historic Red River. An excellent program for the ladies has also been arranged.

# BY-LAWS OF THE ENTOMOLOGICAL SOCIETY OF CANADA (Revised 1969)

## I. NAME

The Corporation shall be known as the Entomological Society of Canada, hereinafter referred to as the Society.

## II. OBJECTS

The objects of the Society shall be to study, advance, and promote entomology.

## III. HEAD OFFICE

The head office of the Society shall be located in the City of Ottawa in the Province of Ontario, Canada.

## IV. MEMBERSHIP

1. The classes of membership shall be Member, Sustaining Associate, and Affiliated Society.

a. Member:

(1) Active member — Any person interested in entomology may become an active member upon payment of the prescribed dues.

(2) Honorary member — Any member who has made an outstanding contribution to the advancement of entomology may be nominated for this class of membership by the Honorary Membership Committee (see Article X (3)). The number of honorary members shall not exceed ten or more than one percent of the active members, whichever is greater. Honorary members shall not pay dues.

(3) Student member — Any student interested in entomology and who provides evidence of student status may become a student member upon payment of prescribed dues. Confirmation of this status is required annually.

b. Sustaining associate: Any organization that supports the objects of the Society may become a sustaining associate upon payment of the prescribed dues.

c. Affiliated society: Any scientific society with the same general objects may apply for affiliation. Application must be made in writing to the Secretary and be submitted on the next mail ballot to the members.

2. Privileges of membership:

a. Only active members may vote and hold office in the Society.

b. Affiliated societies shall have representation on the Governing Board as prescribed in Article VIII (2) of these By-Laws.

3. Withdrawal from the Society:

a. Any member may withdraw from the Society by a written resignation delivered to the Secretary, but without refund of dues.

- b. The affiliation between an affiliate and the Society may be terminated by either one giving twelve months notice in writing to the other.

## V. DUES

1. Dues for the different classes of membership shall be determined from time to time by resolution of the Governing Board and approved by the general membership of the Society at an annual meeting.

2. Dues for active members shall be due and payable on the first day of January each year. If dues have not been paid by the last day of April the rights and privileges of membership shall be suspended and the member's name may be removed from the mailing list. Re-instatement may be effected by paying the dues by the end of December of the same year. After this date membership ceases and re-application for membership and payment of dues for the delinquent year shall be required.

## VI. GOVERNING BOARD

1. The Society shall be managed by a Governing Board, hereinafter referred to as the Board. The Board shall be composed of:—

a. The Officers:

- (1) The President
- (2) The President-Elect
- (3) The Past-President

b. The Directors:

- (1) Six Directors-at-large
- (2) One Director from each Affiliated Society

c. The Managing Council:

- (1) The Secretary
- (2) The Treasurer
- (3) The Editor

2. Officers and Directors-at-large shall begin their terms of office at the end of the annual meeting following their election. Each officer and director shall have a vote. The terms of office for the members of the Managing Council shall be the calendar year following their appointments.

3. The Board shall meet at the call of the President or at the written request of five members of the Board.

4. Maximum honoraria, if any, for members of the Board for the forthcoming year shall be determined by the members at an annual meeting.

5. The Board shall determine the salaries of agents and employees.

## VII. OFFICERS

1. Each officer shall hold office for one year.

2. The President shall be that person who has most recently completed a term of office as President-elect. A vacancy shall be filled by the President-elect, who will then serve his normal term as President.

3. The President-elect shall be that person who was most recently elected to this office. After a term as President-elect he shall then become the President. A vacancy shall be filled by the person with the next highest number of votes in the most recent election.

4. The Past President shall be that person who has most recently completed a term of office as President.

## VIII. DIRECTORS

1. The Directors-at-large shall consist of three equal groups, and one group shall be elected each year for a three-year term. A vacancy may be filled by appointment by the Board.

2. Each Affiliated Society shall appoint a Director who shall be a member of the Society. The method of appointment and the term of office shall be decided by each Affiliated Society. A Director appointed by an Affiliated Society may vote by proxy.

## IX. MANAGING COUNCIL

1. The Managing Council shall be appointed by the Board following each annual meeting.

2. The Treasurer shall be bonded and other individuals may be bonded.

3. The duties of the Managing Council shall be:

a. To conduct the affairs of the Society within the policies determined by the Board and by the members at a usual or special meetings.

b. To report to the meetings of the Board.

c. To employ and supervise salaried staff.

4. The duties of the Secretary shall be:

a. To keep minutes of all meetings of the Board and of the Society.

b. To prepare any ballots.

c. To have custody of the corporate seal of the Society.

5. The duties of the Treasurer shall be:

a. To have custody of the Society funds.

b. To report on the finances of the Society when required, to prepare an interim financial statement for the annual meeting, and to prepare an audited financial statement at the end of each fiscal year.

6. The Editor shall be responsible for the Society publications.

## X. COMMITTEES

1. The President shall appoint the following standing committees:

a. The Nominating Committee which shall consist of three members, one of whom shall be designated as the convener.

b. The Election Committee which shall consist of three members, one of whom shall be designated as the convener.

2. The Gold Medal Award Committee shall be chaired by the President. Elect, and it shall include at least two other members of his choosing. The terms of reference shall be determined by the Board.

3. The Honorary Membership Committee shall consist of members appointed by the presidents of the affiliated societies. Each president shall appoint one member. Two members shall retire each year.

Any five active members of the Society may submit a name(s) for consideration by this committee. The number of names submitted for the election ballot shall not exceed the number of vacancies.

4. The President may appoint other committees.

5. Unless otherwise stated at the time of appointment, the term of office of committees shall terminate at the annual meeting following their appointment.

## XI. FISCAL PERIOD

The fiscal period of the Society shall be the calendar year, commencing January 1 and ending December 31.

## XII. MEETINGS

1. The annual meeting of the Society may be held in conjunction with an affiliated society at a time and place determined by the Board in consultation with the affiliated society concerned.

2. Every effort shall be made to announce the times and places of the annual meetings at least two years in advance.

3. A special general meeting of the Society shall be held at the discretion of the Board, or on written request signed by no fewer than twenty-five active members of the Society. This meeting must be held within one month of receipt of the request. Written notice of such special meeting shall be given to all members of the Society at least fourteen days in advance of such meeting, and the purpose(s) for which the meeting is to be held shall be stated on such notices. No other matters shall be dealt with at such a special meeting.

4. At all meetings of the Society and of the Board every question shall be determined by a simple majority of votes unless the By-Laws specify otherwise.

5. At any meeting the chairman shall have a second or casting vote.

## XIII. ELECTIONS

1. The Nominating Committee shall submit to the Secretary a slate of nominees for President-Elect and Directors-at-large to be filled by election for the following year. For each class of position involved there shall be submitted at least one more name than the number of vacancies to be filled. Additional nominations may be submitted to the Secretary in writing over the signatures of at least three active members of the Society. All nominations shall be submitted to the Secretary not later than the last day of March each year. Each nomination shall be accompanied by a signed statement from the nominee indicating his willingness to accept office if elected. The Nominating Committee shall provide a short biography of each candidate.

2. The ballot shall contain the names of the nominees in alphabetical order for each class of position to be filled. The number to be elected for each class of position shall be indicated.

3. The name of any society applying for a filiation shall be added to the ballot.

4. The name(s) of any nominee(s) approved by the Honorary Membership Committee shall be added to the ballot.

5. The ballot shall be mailed to all active members on or before the first day of June. To be counted, all ballots must reach the convenor of the Election Committee not later than midnight on July 15 of the same year.

6. The Secretary shall notify all candidates of the results of the election. The names of the elected candidates shall be announced at the next annual meeting.

7. Each category constitutes a separate ballot and spoiling a vote for one category does not spoil the other categories.

## XIV. QUORUM

1. At any meeting of the Board a simple majority of the voting members shall constitute a quorum.

2. At any general meeting of the Society, twenty-five active members shall constitute a quorum.

3. In the conduct of elections or the transacting of other business by letter ballot, twenty-five returned ballots shall constitute a quorum.

#### XV. AMENDMENT OF BY-LAWS

1. The By-Laws of the Society may be repealed or amended by a two-thirds majority vote by members, the vote being taken by letter ballot, and providing further that such repeal or amendment shall not be in force or be acted upon until approved by the Minister of Consumer and Corporate Affairs.

2. Proposals for changes to the By-Laws shall be submitted by the Board to the members or submitted over the signatures of at least ten members to the Secretary, and subsequently to the members within two months of receipt.

#### XVI. AUDITORS

The members of the Society shall at each annual meeting appoint an auditor (s) to audit the accounts of the Society. A vacancy in the office of auditor may be filled by the Board.

#### XVII. SIGNING OFFICERS

The signing officers of the Society shall be the President or the President-Elect and the Secretary or the Treasurer.

#### XVIII. SEAL

The seal shall be the common seal of the Society by which all sealed instruments of the Society shall be attested under the hands of the signing officers. All contracts, documents and instruments in writing so signed shall be binding upon the Society without any further authorization or formality.

#### XIX. RULES AND REGULATIONS

1. The Board may by resolution prescribe such rules and regulations, not inconsistent with these By-Laws, relating to the management and operation of the Society, as they deem expedient, provided that such rules and regulations shall have force and effect only until the next general meeting of the members of the Society, when they shall be confirmed, and in default of confirmation at such general meeting of members shall at and from that time cease to have force and effect.

2. In these By-Laws the singular shall include the plural and the plural the singular; the masculine shall include the feminine.

### ADDITIONS TO THE MEMBERSHIP LIST TO 31 JANUARY 1970

Armstrong, Jay E., Armstrong Insect Management, 17282 Avenue 324, Visalia, Calif., 93277

Barlow, J. S., Pestology Center, Simon Fraser Univ., Burnaby 2, B.C.

Barnes, Martin M., Dept. of Entomology, Univ. of California, Riverside, 92502

Becker, Hans, Messeweg 11-12 Biol. Bundesanstalt, 33 Braunschweig, Germany

Becker, W. B., Dept. of Ent., Univ. of Massachusetts, Amherst, 01002

Bell, Henry L., USDI National Water Quality Lab., 6201 Congdon Blvd., Duluth, Minn., 55804

Berisford, C. Wayne, Dept. of Ent., Univ. of Georgia, Athens, 30601

Bhakthan, N., Dept. of Biology, Simon Fraser University, Burnaby 2, B.C.

Botros, Adel Mina, Fahmi Abdel Negid St., Villa Ionna Mandara, Alexandria,

U.A.R.



- Butcher, J. W., Dept. of Ent., Michigan State Univ., E. Lansing, 48823  
 Carcasson, R. H., Centennial Museum, Vanler Park, 1100 Chestnut St.,  
 Vancouver 9, B.C.  
 Carruth, L. A., Dept. of Ent., Coll. of Agric., Univ. of Arizona, Tucson, 85716  
 Chabors, Peter C., Dept. of Biol. Sciences, Illinois State Univ., Normal, 61761  
 Cole, Albert E., W. Va. Dept. of Agriculture, Plant Pest Control Div.,  
 Charleston, W. Va., 25305  
 Cole, Roger J., May and Baker Ltd., Ongar Res. Stn., Fyfield Road, Ongar,  
 Essex, England  
 Cunningham, J. C., Dept. of Fisheries and Forestry, Box 490, Sault Ste. Marie,  
 Ont.  
 Dickler, Erieh, Biol. Bundesanstalt für Land und Forstwirtschaft, Inst.  
 für Obsterkrankheiten, 6900 Heidelberg, PF 269, W. Germany  
 Driver, E. A., Prairie Migratory Bird Res. Cen., Univ. of Saskatchewan  
 Campus, Saskatoon  
 Dunn, Russell, P.O. Box 468, Sedona, Arizona, 86336  
 Freitag, R., Dept. of Biology, Lakehead Univ., Thunder Bay, Ont.  
 Garland, J. A., Dept. Fisheries and Forestry, 25 Dafoe Road, Winnipeg 19, Man.  
 Glass, Norman R., Institute of Ecology, Univ. of California, Davis, 95816  
 Croothuis, Dennis, Box 73, Douglas, Wyoming, 82633  
 Guibord, M. O., Macdonald College, Quebec  
 Hagley, E. A. C., Research Station, Can. Agric., Vineland, Ont.  
 Hard, John S., R.R. No. 2, Box 969 B, Juneau, Alaska, 99801  
 Harris, C. R., Res. Inst., Univ. Sub Post Office, London, Ont.  
 Ivanochko, Michael, Room 3129, K. W. Neatby Bldg., Canada Agric.,  
 Ottawa 3, Ont.  
 Johnson, Clarence D., Box 5640, Dept. Biol. Sciences, Northern Arizona Univ.,  
 Flagstaff, 86001  
 Kapoor, Mrs. R. P. D., Dept. of Entomology, Univ. of Alberta, Edmonton, Alta.  
 Kishi, Yoichi, Inst. of For. Zoology, Faculty of Agric., Univ. Tokyo, Hongo,  
 Tokyo, Japan  
 Kitching, R. L., Inst. of Animal Res. Ecology, Univ. of British Columbia,  
 Vancouver 8  
 Krishna, S. S., Dept. of Entomology, Univ. of Manitoba, Winnipeg 19  
 Lunica, D. C., Niagara Chemicals, 1274 Plains Rd., E. Burlington, Ont.  
 Lake, John, 14 Claymore Drive, Toronto 570, Ont.  
 Lee, Hae Poong, Dept. of Biology, Dong-Guk University, Seoul, Korea  
 Leacy, Rudolph, Willard State Hospital, Willard, N.Y., 14588  
 Mackey, Halkard E. Jr., Dept. of Zool. & Ent., Univ. of Tennessee,  
 Knoxville, 37916  
 Malicky, Dr. Hans, Biologische Station, Lunz A 3293, Austria  
 McEwen, F. L., Dept. of Zoology, Univ. of Guelph, Guelph, Ont.  
 Miller, Douglass R., Sys. Ent. Lab., USDA-ARS 3145 5, Bldg. Washington,  
 D.C., 20250  
 Moore, Richard C., Connecticut Agric. Expt. Stn., 123 Huntington St.,  
 Box 1106, New Haven, 06504  
 North, David T., USDA-ARS, Met. & Rad. Res. Lab., Fargo, North Dakota,  
 58102  
 Quraishi, M. S., Dept. of Ent., North Dakota State Univ., Fargo, 58102  
 Rabinovich, Jorge E., Inst. de Zool. Tropical, Facultad de Ciencias Univ.  
 Central de Venezuela, A. Los Chaguamamos, 59058 Caracas, Venezuela  
 Retnakaran, A., Dept. Fisheries and Forestry, Box 480, Sault Ste. Marie, Ontario  
 Sangster, David, 155 Bathurst Drive, Tonawanda, N.Y., 14150  
 Schmitz, Richard F., For. Sciences Lab., 1221 South Main St., P.O. Box 469,  
 Moscow, Idaho, 83843

Selander, Richard B., Dept. of Ent., Univ. of Illinois, Urbana, 61801  
Skowron, Walter S. Jr., 1810 North Street, Suffield, Connecticut, 06078  
Smetana, Dr. A., Nad Cesum Divadlem 1117, Praha 4, Czechoslovakia  
Smith, Thomas, 31 Smith Avenue, Truro, N.S.  
Sterling, W. L., Dept. of Entomology, Texas A & M Univ., College Station,  
77843

Stewart, James F., CIBA Co. Ltd., Agrochemical Division, Dorval, Quebec  
Stryker, Robert C., Ent. Section, 3rd U.S. Army Med. Lab., Ft. McPherson,  
Ca., 30330

Thomas, Peter B., 2 Thorpe St., E. Danbury, Connecticut, 06810  
Thompson, A. R., Canada Agric. Res. Inst., University Sub Post Office,  
London, Ont.

Tohe, Stephen S., Inst. of Parasitology, Macdonald College, Quebec  
Uruea, Eduardo J., Apartado Aereo 3684, Medellin, Colombia

Warren, Jack W., Chemagro Corporation, 3 North 7th Ave., Suite B.,  
Yakima, Washington, 98902

Whitehead, D. R., Dept. of Entomology, Univ. of Alberta, Edmonton

Wilcox, Joseph, 21171 Mobler Place, Anaheim, Calif.

Wise, John Allen, 1379 W. Orange Grove Ave., Pomona, California 91767

Workman, Eric, 390 Toyon Road, Sierra Madre, Calif., 91024

Yatham, S., B. C. Research Council, 3650 Westbrook Cres., Vancouver 8, B.C.

## DYNAMICS OF NUMBERS IN POPULATIONS

An advanced Study Institute on Dynamics of Numbers in Populations is to be held 7-18 September, 1970 at Oosterbeek, the Netherlands, under the sponsorship of the Scientific Division of NATO. The aim is to bring together qualified population ecologists to discuss current topics. To facilitate discussion the number of participants will be limited to about a hundred, and to encourage informal meetings outside the official sessions, the meeting will be held in a place providing comparative isolation.

Proposed topics are: interpretation of data; significance of temporal and spatial heterogeneity of the environment; competition and other types of mutual interference; effects of predators, parasites and pathogens; effects of human interactions; and relevance of changes in the composition of populations. Among Canadians invited to attend are D. H. Chitty, C. S. Holling, R. F. Morris, C. A. Miller, W. Ricker, T. Royama and W. C. Wellington.

## SURVEY MISSION IN NIGER

Through the Canadian International Development Agency, Dr. R. O. Paradis, CDA, Research Station, St. Jean, Quebec, completed a survey mission in Niger from September 21 to October 12, 1969. He was joined in Niamey on October 5 by Dr. W. O. Haufe, CDA Research Station, Lethbridge. Both entomologists were selected to undertake a fact-finding tour and feasibility study of endemic insect-borne diseases along the shores of the Niger River, namely of trypanosomiasis, a mosquito-borne disease commonly known as sleeping sickness, and of onchocerciasis, a disease transmitted by blackflies and frequently causing blindness. Besides Niamey, some time was spent on interviews in Geneva, Switzerland, in Carcassonne and Paris, France, and in Ougadougou and Bobo-Dioulasso, Upper Volta. Having assessed the research currently being done and means to limit the spread of those diseases, Dr. Paradis was able to determine the nature of the contribution which Canada might make to fight against them and reported accordingly to CIDA.

I. Rivard



## THIS CANNON NOT FIRED, RETIRED

Fred M. Cannon, Entomologist, Research Station, Charlottetown, retired on February 5, 1970, after 42 years of service with the Canada Department of Agriculture. Mr. Cannon was born at St. Eleanor's, P.E.I., and received his elementary education in P.E.I. He took the pre-medical course of studies at Mt. Allison University, then studied medicine for three years at Dalhousie University. He abandoned his pursuit of a career in medicine in 1938, and embarked on one in agriculture. He entered Macdonald College, obtaining his B.Sc. in 1937 and specializing in entomology, was granted his M.Sc. in 1939.

During the summers of 1928 to 1936, Mr. Cannon worked as a seed potato inspector in P.E.I. In 1937 he was appointed to undertake work with the Division of Entomology in P.E.I., and thus became responsible for organizing Entomological research in that province. His research in the earlier years centered on strawberry weevil control and the biology and control of root maggots. Later he studied the biology and control of the barley jointworm and the control of maggots in blueberries and cranberries. Potato insects were his chief interest and for many years, most of his experimental effort was devoted to this field. Recently he has been investigating the use of systemic soil insecticides for potato insect control, and the use of ultra-low volume sprays.

Mr. Cannon is married to the former Elizabeth MacLeod, Charlottetown, and they have four children, Nancy, Stewart, Robert and Elizabeth. He is an active member of the Charlottetown Rotary Club and for ten years has been a Commissioner for the Village of Sherwood. In this capacity, he was instrumental in the organization of the Parkdale-Sherwood police force. Besides golfing and curling, he enjoys woodworking as a hobby.

During a recent meeting of the Atlantic area entomologists in Moncton, N.B., Mr. Cannon was presented with a gift in honour of his approaching retirement. On February 13, 1970, members of the Research Station staff assembled and presented him with a gift on their behalf.

His many friends and associates wish him a happy retirement.

L. S. Thompson

## O.A.C. PROFESSOR RETIRES

Dr. W. E. Heming retired recently from the Zoology Department at the University of Guelph after 20 years continuous service. At a party in his honour, his associates presented him with a camera.

After graduating from the Ontario Agricultural College in 1929, Ted Heming took a position in the Chatham laboratory of the Entomological Branch of the Canada Department of Agriculture. He returned to Guelph in 1929 and remained with the Department of Entomology and Zoology of O.A.C. until 1934. In that year, he took a position at Cornell University where he stayed until 1940, gaining a Ph.D while he was there.

Dr. Heming spent the next nine years of his career at Whittier College in California. While visiting the O.A.C. for his 20th class reunion in 1949, he was offered a faculty position which he accepted. During his long and dedicated career at Guelph, he was chairman of the Legume Research Committee for several years, and chaired the Field Crops Protection Committee for a lengthy term.

Dr. Heming's specialization at Guelph was applied zoology and entomology. He has taught courses to and supervised the postgraduate research of a great many entomologists now working both in Canada and abroad.



## BOYCE RETIRES AT HARROW

Mr. H. R. Boyce, Research Station, Harrow, Ont., retired on December 31, 1969, after over 38 years service with the Canada Department of Agriculture. Mr. Boyce was born in England, but came to Ontario at an early age. He graduated with a B.S.A. from the Ontario Agricultural College in 1928, and was granted his M.S.A. degree from the University of Toronto in 1943. He has been one of the more active members of the Entomological Society of Canada and now serves as the regional director for Ontario.

Mr. Boyce joined the staff of the Dominion Parasite Laboratory, Belleville, in 1931 and remained with that establishment until 1948. In 1948, he transferred to the former Science Service Laboratory at Harrow where he was placed in charge of entomological research. He has an extensive knowledge of crops and their insect pests and has made many significant contributions to Canadian agriculture. The Entomological Society of Ontario acknowledged these contributions by electing him President for the year 1967-68. He is highly respected by the growers in southwestern Ontario and his advice was sought on a wide range of problems.

Herb Boyce and his wife Norah will continue to reside in Harrow.

W. H. Foott

## PIONEER FRENCH-CANADIAN ENTOMOLOGIST RETIRES



Dr. Lionel Daviault, Regional Director for the Canadian Forestry Service in Québec, retired at the end of February. Dr. Daviault was the first French-Canadian forest entomologist and built a first-rate research establishment at Sté. Foy. At the time of his retirement, he was responsible for the administration of all Federal forestry and forest research in Québec.

M. Lionel Daviault est né le 26 février 1905, à Saint-Jérôme, comté de Terrebonne. Il a étudié à l'Institut Agricole d'Oka de 1920 à 1924; à l'Université Connell durant la session d'été de 1924; au

Collège Macdonald (Université McGill) de 1924 à 1926. Une bourse du gouvernement de la province de Québec lui a permis de poursuivre ses études durant trois années au Laboratoire de l'Evolution des Êtres organisés de l'Université de Paris (1928-29) et durant un an à l'École des Eaux et Forêts de Nancy (1929-30).

M. Daviault détient une licence ès-sciences agricoles de l'Université de Montréal (1924), une maîtrise ès-sciences de l'Université McGill (1927), un diplôme d'études supérieures de l'Université de Paris (1928); et un doctorat ès-sciences de l'Université de Montréal (1935).

En 1928, la Société Entomologique de France lui décernait le prix Porter-Chili, et l'ACJC son prix d'Action intellectuelle. Il a gagné un prix du gouvernement de la province de Québec en 1940, la médaille Léo Parizeau de l'ACFAS en 1959 et la médaille du Centenaire de la Confédération en 1967.

En 1930, M. Daviault fut nommé directeur du Laboratoire d'Entomologie forestière du gouvernement fédéral à Berthierville. Il quitta ce poste en 1943 pour devenir directeur du Bureau d'Entomologie au Ministère des Terres et Forêts de la province de Québec. La même année, il était chargé par l'Université Laval d'un cours d'entomologie à la Faculté de Foresterie et de Géodésie, et devenait professeur agrégé de cette même faculté en 1948. De 1945 à 1952, il représenta la province de Québec au sein de l'office fédéral pour la suppression des insectes nuisibles aux forêts. Depuis 1952 il est directeur pour la région de Québec du Ministère des Pêches et des Forêts.

M. Daviault est membre de la Société Royale du Canada depuis 1955. Il a été président de diverses sociétés scientifiques et président de l'ACFAS en 1949-50. Il est l'auteur de plus de 150 publications.

Bernard J-R Philogène

## "INTERNATIONAL ORGANIZATION FOR BIOLOGICAL CONTROL" (IOBC)

Since the early 1960's there have been discussions and negotiations, principally between the International Advisory Committee for Biological Control and the OILB (Organisation Internationale de Lutte Biologique), to expand the present, largely European, OILB into a truly world-wide organization. These efforts culminated in a conference sponsored by the International Union of Biological Sciences (IUBS) in Amsterdam, November 17-19, 1969, to attempt to finalize plans for a new global organization.

The meeting, held at the seat of the Royal Academy of Sciences of the Netherlands, was convened by Professor F. A. Stafleu, Secretary General of IUBS, and was attended by 34 specialists in biological control from all over the world.

Plans for the new organization, under the title given in the above heading, were consummated as far as could be done at this time. New statutes were proposed and approved by the delegates and other arrangements reached. The statutes and agreements, along with a general report of the meeting, will soon be submitted to IUBS for approval. The IUBS will then formally request the OILB to act upon the new statutes and agreements. Approval by the current OILB presumably will occur at their next General Assembly in February, 1971, at which time new members could be admitted forthwith and the formation of regional sections proposed and immediately approved.

A very brief outline of major aims and functions of the new organization, and of steps taken to consummate it, follow:

- (1) It was agreed that it was desirable for OILB to develop into a world-wide organization; and
- (2) It was agreed that the function and aims of this global body will be to:
  - (a) promote the development of biological control, its application in integrated control programs, and international cooperation to these ends. In this organization the term "biological control" means the use of living organisms to prevent or reduce the losses or harm caused by pests.
  - (b) collect, evaluate and disseminate information about biological control.
  - (c) promote national and international action concerning research, the training of personnel, the coordination of large-scale application and the encouragement of public awareness of the economic and social importance of biological control.
  - (d) arrange conferences, meetings and symposia, and take any other action to implement the general objectives of the Organization.

Under these broad functions, the following more specific aims, activities and services, among others, are contemplated:

- (1) bring awareness of the importance of biological control to countries having little expertise in this field.
- (2) sponsor working groups on major problems of international interest.
- (3) distribute information on projects under way and on the natural enemies available from various sources, and facilitate discovery and international transfer of natural enemies.

- (4) promote the training of biological control specialists.
- (5) support basic bio-ecological research on problems fundamental to biological control.
- (6) provide information on available facilities for the identification of natural enemies and support identification services.
- (7) publish the journal ENTOMOPHACA as well as monographs, and possibly a newsletter.
- (8) document the biological control literature and support the development of computerized information storage and retrieval.
- (9) supply newsletters dealing with progress reports, personnel, new techniques, new projects, and such items.
- (10) issue periodic lists of biological control workers and their research specialties.
- (11) provide a consultation service.
- (12) represent and promote the interests of biological control research in discussion with national or international organizations (FAO, WIO, IBP).

The new organization would provide for the voluntary formation of regional sections generally on a broad bio-geographical basis. For example, either a North American or the entire American region is contemplated as one. Membership will be open, both to individual scientists and to institutions. Fees for the global organization remain to be determined, but will approximate \$10.00 for individual members, which will include a subscription to ENTOMOPHACA, the current OILB journal which will be substantially expanded. Regions will be largely autonomous within the provisions of the statutes of the global organization, and will develop their own by-laws and fees. Members will have the choice of affiliating solely with the global organization, or with it through a regional section. The proposed statutes of the new global organization will be available for distribution early in 1970 and will provide more details of organizational structure, aims and functions.

During 1970, interested parties plan to proceed with the tentative formation of an American region and an Oriental region, and other regions doubtless will do the same. The current OILB will integrate into the new organization as a region. The following slate of candidates for the Executive Committee of the new Council of IOBC, proposed to be inaugurated in 1971 upon the ratification of the new statutes, was recommended by unanimous vote of the delegates in Amsterdam: Paul DeBach, President; E. Biliotti, Vice President; Frank Wilson, Vice President; Vittorio Delucchi, Secretary General; Fred J. Simmonds, Treasurer.

This group is formally appointed by the IUBS as an ad hoc committee to consummate details of the organization of the new IOBC and to serve until 1971. Additional members appointed to this committee include: G. A. Beglyarov, P. S. Corbet, Cliff Davis, C. Mathys, Reece Sailer, Keizo Yasumatsu.

Further information regarding the new IOBC may be obtained by writing to members of the above ad hoc committee whose addresses are:

G. A. BEGLYAROV, All Union Inst. of Phytopath, Golitzino, Moscow, distr. USSR.

E. BILIOTTI, Dept. de Zool. Agric., Route de St. Cyr, F-78 Versailles, France.

P. S. CORBET, Res. Inst., 228 Dundas Street East, Belleville, Ont., Canada.

C. J. DAVIS, Div. of Ent. and Marketing, Dept. of Agric. and Conserv.,

Honolulu 14, Hawaii, U.S.A.

P. DeBACH, Div. of Biol. Cont., Univ. of California, Riverside, Calif. 92502, U.S.A.

- V. DELUCCHI, Ent. Inst. der Eidgenoess. Techn. Hochschule,  
Universitaetstrasse 2, CH-8006, Zurich, Switzerland.
- G. MATHYS, EPPO, 1 rue Le Notre, Paris 16e, France.
- R. I. SAILER, Insect Ident. and Parasite Introduction Res. Br., U.S.D.A.,  
Beltsville, Maryland, 20705, U.S.A.
- F. J. SIMMONDS, Commonw. Inst. of Biol. Cont., Gordon Street, Curepe,  
Trinidad, W.I.
- F. A. STAFLEU, I.U.B.S., Tweede Transitorium, De Uithof, Utrecht, The  
Netherlands.
- F. WILSON, Sirex Biol. Cont. Unit, Silwood Park, Sunninghill, Ascot, Berks.,  
England.
- K. YASUMATSU, Fac. of Agric., Kyushu University, Fukuoka, Japan.

## PESTICIDES USED ON LIVESTOCK

An Advanced Study Institute on Toxicity of Pesticides Used on Livestock is to be held 13 to 21 July 1970, at Lethbridge, Alberta, under the sponsorship of NATO. Lectures on selected topics including aspects of the problems of toxicity to mammals, residues in food chains and the direction of future research, will be given by internationally recognized experts in the field. Each lecture will consist of a critical appraisal and survey of the topic and will form the basis for further discussion and presentation of original data by other conferees, who, for want of a better term, will be called 'auditeurs'. A great deal of emphasis will be placed on informal discussions and arrangements will be made for auditeurs to give informal seminars or lectures on the selected or related topics. The afternoons have been kept free for seminars, discussions, and visits to places of scientific importance. It is hoped that the Institute will provide an opportunity for increased contacts and cooperation among the scientists from NATO countries.

For further information write to M. A. Khan, Research Station, Lethbridge, Alberta, Canada.

## ANNOUNCING THE 14TH INTERNATIONAL CONGRESS OF ENTOMOLOGY

THE 14TH INTERNATIONAL CONGRESS OF ENTOMOLOGY will be held in Canberra, Australia, from 22nd to 30th August, 1972.

The Congress will be divided into Sections covering the following fields: Taxonomy, Morphology, Zoogeography, Palaeontology; Genetics; Physiology, Cytology and Fine Structure; Behaviour; Biochemistry; Ecology; Biological Control and Insect Pathology; Non-Insecticidal Control; Population Management and Integrated Control; Toxicology, Resistance and Side Effects of Insecticides; Medical and Veterinary Entomology; Agricultural Entomology; Forest Entomology; Stored Products Entomology; Tropical Entomology.

There will also be Symposia covering a wide range of topics. Arrangements are being made for pre-, post- and in-Congress tours of entomological, scenic and historical interest.

A preliminary circular giving information on the Congress will be issued in May, 1970. Anyone wishing to receive this circular should write to the Secretary of the Congress, who will be pleased to answer enquiries. The address is:— Mr. C. N. Smuthers, Secretary, 14th International Congress of Entomology, The Australian Museum, 6-8 College Street, SYDNEY, N.S.W., AUSTRALIA, 2000.



## WHERE THEY'RE AT

Dr. B. N. Smallman, Queen's University, will take his sabbatical for the 1970-71 session and is going to Australia to work with Dr. D. G. Waterhouses's group at D.S.I.R.O.

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Dr. A. Mansingh, Forest Research Laboratory, Victoria, and a former post-doctorate associate of Dr. B. N. Smallman of Queen's University, is returning to Uppsala to accept a one-year appointment as a research associate.

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Dr. A. S. West, Queen's University, spent a month in Africa (principally in Ghana) on a WHO assignment relating to the control of blackflies, the vectors of onchocerciasis. This disease, which causes blindness, affects an estimated 80,000,000 people in West Africa. WHO is consulting as many authorities on black fly control as possible, since plans are being made to attempt to eradicate the disease.

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Dr. P. S. Corbet, Director, Research Institute, Belleville, Ontario, has been named Chairman of the North American Regional Section of I.O.B.C., the International Organization for Biological Control. See a report on the organization meeting of I.O.B.C., submitted by Dr. Corbet, elsewhere in this issue.

Dr. Corbet also participated in the Informal Consultations on Alternative Methods of Vector Control held in Geneva, Switzerland, on December 15-19, 1969. This meeting was convened by the Vector Biology and Control Unit of the World Health Organization.

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## POST-DOCTORAL FELLOWS

T. R. New, B.Sc., A.R.C.S., D.I.C., Ph.D. (Imperial College, London), on a National Research Council Post-doctoral Fellowship for 1969-70 to do research at the Research Institute, Belleville, Ontario, on the biological control of weeds. Prior to coming to Belleville, Dr. New spent nine months on an expedition to Central Brazil, studying the ecology of Psocoptera and Neuroptera. In August 1970, he plans to take up a Lectureship at LaTrobe University, Melbourne, Australia.

S. Yazgan, B.Sc., Ph.D. (University of Ankara), sponsored by the University of Ankara, Ankara, Turkey, for 1969-70 to do research at the Research Institute, Belleville, Ontario, on the development of synthetic diets for mass production of beneficial insects.

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## RECOMMENDED READING

One of our correspondents, Joan F. Bronskill, C.D.A. Research Institute, Belleville, sent along a photocopy of an article in *Nature* (224: 1054) entitled "Canada shows Promise but must try Harder". We cannot reproduce the article here, but we agree with Dr. Bronskill that the article is of interest to Bulletin readers. It describes an outsider's, OECD'S, view of Canadian science and science policy.

## IMPORTANT VISITORS

Mr. M. E. Solomon, formerly Head of the Pest Infestations Laboratory, Slough, Bucks, England, recently visited four Canadian establishments. Within the past year he has taken up a new appointment in charge of the Fruit Insect Section of the Research Station, Long Ashton, Bristol. In line with his new assignment he is to red Australia and New Zealand to inspect their orchard work. On the return trip he visited C.D.A. research establishments at Summarland, B.C., Vineland, Ont., and Kentville, N.S. He also visited the Forest Research Laboratory at Fredericton, N.B. to discuss population ecology.

He is very well known for his work in population dynamics and has just completed an excellent concise (60 pp.) book "Population Dynamics" published by Edward Arnold and distributed in Canada by The Macmillan Company.

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## INSECT ENDOCRINOLOGIST VISITS LAVAL.

Professor Pierre Joly, from Université de Strasbourg, France, spent three weeks in Quebec in November 1969 as visiting professor. This was professor Joly's first visit to North America. He came as a guest of the Department of Biology (Fac. of Science) and the Department of Biochemistry (Fac. of Medicine) of Université Laval. Dr. Joly is the author of the book "Endocrinologie des Insectes" (1968).

While at Laval, Dr. Joly gave a series of lectures on insect metamorphosis and various aspects of insect endocrinology. He also gave two seminars on related subjects. Dr. Joly also took the time to visit the Forest Research Laboratory of the Department of Fisheries and Forestry and the Department of Biology of the University of Sherbrooke.

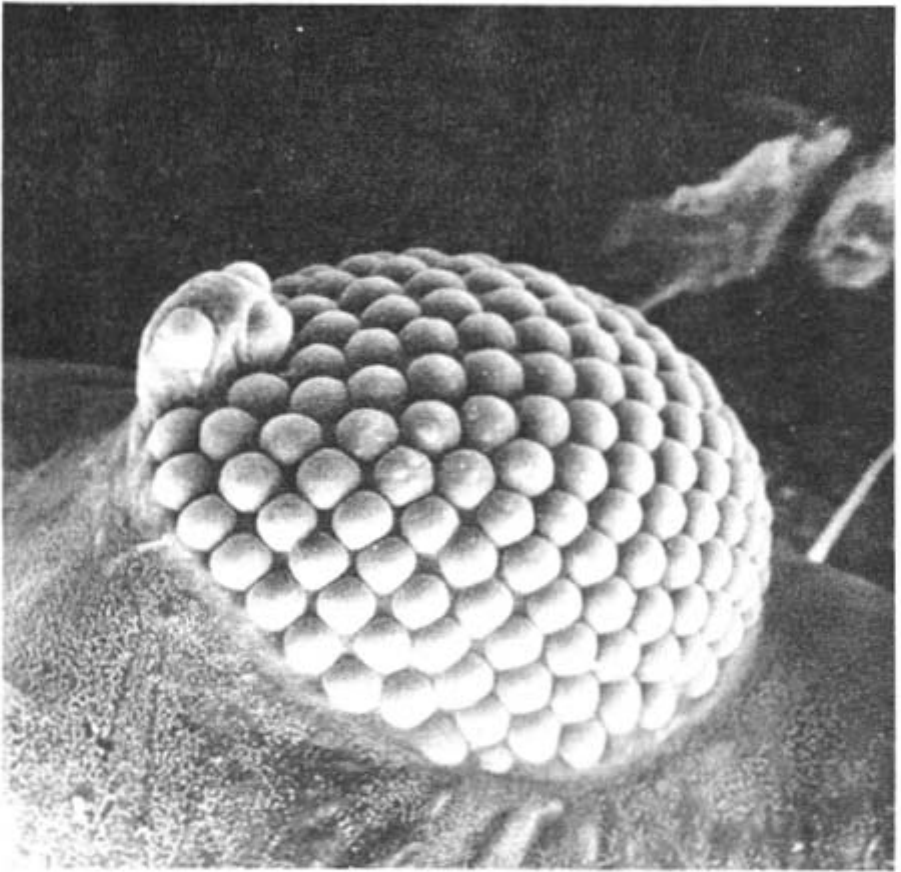
B. J.-R. Philogène

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## SCITEC

SCITEC, the Association of the Scientific, Engineering and Technological Community of Canada, was founded 17 January 1970 at Ottawa in response to the question of the Senate Committee on Canadian Science Policy "Who speaks for science?". The objectives are to speak for the Canadian scientific, engineering and technological community as a whole, to advise government on science policy in the national interest and to explain science and technology to the general public. Through their participation in the Biological Council of Canada, the Canadian Federation of Biological Societies, and the Agricultural Institute of Canada, entomologists will be hearing a great deal more of this new organization.

## FEATURE PHOTOGRAPH



## FEATURE PHOTOGRAPH

Compound eye of *Myxus persloae* (Sulzer), x 630. Scanning electron photomicrograph by Jean B. Adams, Fredericton, and Forcst W. Fyfe, Halifax, with a Cambridge Stereoscan at the Faculty of Medicine, Dalhousie University, using live material freeze-dried and gold palladium coated.

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Address communications to the Secretary at: Department  
of Entomology, University of Alberta, Edmonton.

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Addresses are omitted if correct in the latest (1969) membership  
list of the Entomological Society of Canada.

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