of the Entomological Society of Canada

Bulletin

Vol. 4, No. 4, December, 1972

THIS ISSUE

Society Officers	inside front cover
Editorial	69-70
Letter	70
Cold Comfort = by R. W. Salt	71
Merbert H. Ross, Honorary Member	73
Presidential Address - by Philip S. Corhet	74
Population Limitation and Resource Use	77
Minutes, 22nd Annual Meeting, Montreal	78
Gold Medal Nominations	83
Governing Board 1972-73	84
Governing Board 1971-72	85
Actions of the Governing Board 28 Nov. 1972	86
Actions of the Coverning Board 30 Nov. 1972	87
Robin Toorapson - A Kindred Spirit - by A. W. Baker	89
Nominations for Honorary Membership	91
Reports of Editor, Committees and Representatives	
Editor	92
Insect Colonies	92
Assistant Editor (Bulletin)	93
Archivist	94
Editorial Board	95
Figance	96
Cogain	98

(Cootinued Inside back cover)

D. P. Pictou Editor (Society Publications)
D. C. Eidt Assistant Editor (Bulletin)

Cover Ocaign: M. A. Sydor, big-Graphic Unit

Published by the Entomological Society of Canada K. W. Neatby Building, Ottawa

THIS ISSUE (Continued)

Employment	99
Student Encouragement	100
Publicizing Entomology	101
Gift Subscription	101
Membership	102
Common Names	102
Treasurer	103
Achievement Award	104
Common Names of Pest Control Chemicals	104
Insect Golonies	105
Electioo	105
Exchanges	105
From the Journals	
Mosquito Control	106
Bee and Wasp Populations	108
Biulogical Control of Grasshoppers - by D. K. McE. Kevan	107
Reviews	
Dynamics of Population	108
Pesticides: the Issues the Alternatives	109
Annual Review of Entomology	109
Science Council of Canada Report No. 17	110
Science Council of Canada Report No. 18	111
Officers - Regional Societies	113
Employment	114
Personalia	115-116

ENTOMOLOGICAL SOCIETY OF CANADA

President:

P. S. Carbet, Dept. of Biology, University of Waterloo, Ontario

President-Elect:

D. K. McE. Kevan, Dept. of Entomology, Macdonald College, P.O.

Past-Prasident:

W. F. Baldwin, Atomic Energy of Canada Ltd., Chalk River, Ontario

Secretary:

D. M. Davies, Dept. of Biology, McMaster University, Hamilton, Oat.

Treasurer:

B. C. Secher, K. W. Neatby Bldg., Carling Ave., Ottawa KIA 0C6

Editor:

D. P. Pielou, Dept. of Biology, Dalhousto University, Halifax

NEW APPOINTMENTS

Chairman of the Science Policy Committee: W. F. Baldwin has replaced A. S. West

APPOINTMENT OF SECRETARY

Professor Douglas M. Davies, Oppartment of Biology, McMaster University, Hamilton, Ontario has accepted the appointment as Secretary of the Entomology Society of Canada, in succession to Mr. D. G. Peterson who resigned at the end of 1971.

Philip S. Corbet President

Contributions and correspondence should be sent to: D. C. Eidt, Editor, Bulletin of the Entomological Society of Canada, P.O. Box 4000, Fredericton, New Brunswick. Inquiries about subscriptions and back issues should be refered to the Treasurer, Entomological Society of Canada.

The deadline for the next issue Vol 4, No. 2 for June 1972 is 15 May.

of the Entomological Society of Canada

Bulletin

Vol. 4, No. 4, December, 1972

Editorial

RETIRED MEMBERS

The Retired Members' Laucheon was held again this year, and it was again a pleasure to greet our retired colleagues. Unfortunately all the best places to hold the luncheon had been breempted and it was not possible for all of us to meet or hear from each of them. Many people thought the huncheon was for, rather than in honour of, retired members and did not sign up for it. Another year, try not to miss this event. We were pleased to honour George Mahoux of Ste. Foy, P. Q. who is 83. E. Mehille DuPorte who turned 81 in October, Jean B. Maltais, Oswald Peck, and R. W. Salt our 1972 Gold Medallist.

FELLOWSHIPS

The idea of a Fellowship Class has received careful consideration in committees and in the Coverning Bourd. The concept recognizes that we have many truly worthy people among us who serve the objectives of the Society "... to study, advance and promote entemology". Traditionally a custom of European societies for recognizing excellence among their members, fellows are now named by many North American Societies. It is a fine tradition we might well adopt because we should be unashamed and proud to acknowledge excellence where we find it. When asked if they approved the principle of a Fellowship Class, over 70% of the membership responded "yes", a clear mandate for The Society to proceed.

FELLOWSHIPS

The idea of a Fellowship Class has received cautious consideration in committees and in the Governing Board. The concept singles out some members as serving the objectives of the Society ". . . to study, advance, and promote entomology, presumably better than the rest. It leaves two other classes of entomologists, those when are not fellows but are members, and those who are neither fellows nor members. A traditional European custom, we in our already two class - concious society should avoid it because it not just points to excellence in some, but implies a lack of it in others. When asked if they approved the principle of a Fellowship Class, nearly 30% of the meinhership responded "no", an emphatic warning to the Society to forget it.

EDITORIAL

POPULAR ENTOMOLOGY

The keepers of the public purse are becoming ever less inclined to finance entomology unless they are convinced that benefits they can foresee might accrue. The problem is that foresight doesn't extend very far and support wanes for much that entomologists regard as worth doing. To make entomologists heard the Bulletin hopes to increase its content of entomological reporting so that the popular press can find something in it. K. S. McKinlay of the C.D.A. Research Station, Saskatoon, has offered to lead our effort. Mac is enthused about the prospect, but without our help will not be able to do much. Dont wait for him to ask. If your recent paper is of popular interest, render a summary in popular language and send it to him. If you need help and encouragement in writing directly for the popular press, Mac is available.

LETTER TO THE EDITOR

Sir:

In the Bulletin (4(3):55) a review was published of Biological Control Programmes against Insects and Weeds in Canada 1959-1988. The citation stated that this book was "by Staff of the Canada Department of Agriculture, Belleville, Ontario". Whereas this statement is not incorrect, it is (as it stands) very misleading.

This volume was in all important respects a collaborative project involving the Canada Department of Agriculture and the (then) Canada Department of Fisheries and Forestry. As the Introduction (p. x) makes clear, its preparation was the responsibility of an interdepartmental committee comprising: Dr. P. Harris, Dr. J. S. Kelleher, Mr. G. D. Williamson and myself (from C. D. A., Belleville) and Mr. R. M. Prentice and Mr. W. A. Reeks (from C.D.F.F., Ottawa). Mr. Prentice and I served as compilers of the book; and I chaired the committee.

The mistake which necessitates this letter also featured in a promotional leaflet distributed by the Commonwealth Agricultural Bureaux. I welcome this opportunity to correct it — not the least because the collaboration at all stages of this major broject was exceptionally congenial and productive.

Philip S. Corbet University of Waterloo previously Director, Research Institute, C.D.A. Belleville

CANADIAN ENTOMOLOGIST 100 YEARS AGO

The Aphis family is, as yet, very little known in low latitudes, and there are only two instances of its occurrence to the south of the equator. The first is a Madagascar genus, published by Coquerel: . . . The second dwells near New Caledonia, and is described by Montrouzier – Francis Walker (4:97)

COLD COMFORT



The following is the text of the address of Dr. Reginald W. Salt to the Joint Annual Meeting of the Entomological Societies of Quebec, America and Canada 27 November 1972 when he was presented with the Cold Metal Award for Outstanding Achievement of the Entomological Society of Canada

R. W. SALT

My brief remarks will constitute a plea for more interest in insect coldhardiness and, by inference, for the support of basic research in any field.

I truly enjoyed my research on insect freezing and cold-hardiness. There were always so many intriguing questions and so few satisfactory answers that one could follow several promising lines and retreat from dead ends without hesitation. Almost any discovery was new because so few others were or had been working along similar lines — a utopian situation compared to the research handwagons in some fields.

When I first became interested, in 1931, in the reactions of insects to cold, there was a lot of mystery involved. Consequently there was a lot of misinformation and plain nonsense peddled in those days, by people who dabbled in this profound biological mystery with insufficient grounding in the physical sciences. I was one of them.

My first graduate instruction was at Montana State College under A. L. Strand and C. Allan Mail, both of whom had been graduate students at the University of Mamesota in the twenties when Vm. Robinson and N. Payne were developing the bound water concept to explain insect c ld-hardiness. A simple-laboratory demonstration by Strand and Mail of the heat of crystallization given off by a freezing insect made a deep and lasting impression on me. I became so intrigued by the mysteries of supercooling and freezing that there was no question of them remaining my prime research interest. They became the subject of my master's and doctors theses but then, in the middle of the depression, further work along these lines had to be postponed while I struggled with the control of economic pests and did a bit of teaching. After the war I returned to basic research, sharing time at first with diapause problems before devoting full time to cold-hardiness.

At first my concern was with insects alone, but with more experience and wider reading I realized that workers in widely scattered fields shared some common ground with me. Cloud physicists were freezing water droplets, medical technologists were protecting living cells against the injuries of freezing by the use of glycerol and other protectants, while others were investigating the causes of frost-heave in soils, roads and porous rock. Such a wide variety of collateral research maturally molded my own thinking, and it

must have influenced others. The formation of the Society for Cryobiology about eight years ago was one response to the broadening interest and an indication of the uniturity and importance of the component fields of research.

While all this growth was taking place around me I was naturally aware of the long-continuing scarcity of workers in the entomological component. Papers did appear occasionally, mostly mere records of experimental data and, disappointingly, seldom cognizant of current literature and concepts; much of it, in fact, twenty to thirty years behind the times. When from time to time I was faced with the need to justify my research to my employer, I could not claim to be one of a select, important group. Rather, I had to defend the field on its promise of future success, along with an appeal to national pride which ran somewhat as follows: winter in most of Canada makes insect coldhardiness problems of practical concern and provides a natural base for possible leadership in the field. Although this situation has existed in Canada ever since the beginning of interest in entomological research, no Canadian university has made any serious attempt to tackle insect cold-hardiness problems. In marked contrast, the Canadian Department of Agriculture gave me long-term support and freedom to pursue my chosen research from about 1943 onward. For a few years C. R. Sullivan and G. W. Green, of the forest entomology group at Sault Ste. Marie, did some excellent work of a practical nature, as did A. W. MacPhee in Nova Scotia. They sought answers to specific problems involving cold-hardiness, but they had other responsibilities that claimed their future attention.

In the late fifties, E. Asahina, a Japanese botanist at Sapporo who had studied freezing in plant tissues, switched his interest to insects and with his colleagues has produced a great deal of excellent fundamental work, particularly on freezing-protectants and their relation to diapause. L. Somme, who spent a year with me in 1962-63, has done comparative studies of winter survival of insects and mites in different climatic regions of Norway, and has related his results to protective polyols. In the past five or six years Miller and John Baust have initiated research on a wide series of fundamental problems of insect cold-hardiness in Alaska and have made impressive headway. Though Baust was at last word in upper New York State, he is continuing the work in both states. Alaska, like much of Canada, is a very appropriate place for cryobiological research.

When I retired two years ago my research project was dropped. Canada is no longer adequately represented in this field, for as I pointed out earlier, no Canadian university has ever sponsored serious work in it. At present, our previous record is cold comfort indeed for Canadians, and I can only hope that the void is not permanent.

In this brief address I have not attempted to develop compelling reasons for support of insect cold-hardiness research. Canada's need for it is a fact of life that will somer or later make itself clear. Regardless of need or practical considerations, I prefer, in closing, to stress the excitement, satisfaction, and pure enjoyment I derived from my resurch, and to recommend it on this hasis alone.

CANADIAN ENTOMOLOGIST 100 YEARS AGO

we regret that we have to mete out a word of consure for . . . those who have been for some time receiving this publication, but who have neglected to return the quid pro quo, and to send us the trifling amount of their subscription (4:2)

NEW HONORARY MEMBER



Dr. Herbert H. Ross

Dr. Herbert H. Ross, Department of Entomology. University of Georgia, Athens, was elected to Honorary Membership in 1972. He was received by the Society and Dresented with the Honorary Membership Centificate by President P.S. Corbet at the Annual General Meeting at Montreal, 28 November.

MEMOIRS OF THE ENTOMOLOGICAL SOCIETY OF CANADA

As a sizeable proportion of our members were interested only in certain and not all Memoirs, and as the cost of publication, handling and mailing was considerable, a change in policy was initiated some munths ago. Members who wish all Memoirs will receive them as they are published. Members who wish only certain Memoirs can obtain those by writing directly to the author. Authors are supplied with copies by the Society for this purpose, but when this supply is exhausted there is no way to obtain the Memoirs from the Society unless a member purchases the complete year's back volume of The Canadian Entomologist. A list of Memoirs is published in the December 1971 issue of The Canadian Entomologist and the publication of new Memoirs will be announced in the Bulletin.

THE ROLE AND RESPONSIBILITY OF THE ENTOMOLOGICAL SOCIETY OF CANADA



Presidential Address

Entomological Society of Canada

Montreal. Quebre

27 November 1972

PHILIP S. CORBET

president Eden, President Auclair, members of the Entomological Societies of America, Quebec and Canada, ladies and geotlemen: many of us attending this joint meeting belong to more than one of the participating Societies. Thus to the advantages of holding a combined meeting will be added the pleasure of talking entomology with fellow members whom one seldom sees. It promises to be a very rewarding few days; and it is against this happy prospect that, on behalf of the Entomological Society of Canada, I welcome all those present and acknowledge our good fortune in being able to meet in such a vibrant and attractive city as Montreal, and in a Province so beautiful as Quebec.

Messieurs les deux Présidents, membres des trois Sociétés entomologiques, messèames et messieurs: la plupart d'entre nous sont membres de plus d'une des trois sociétés participantes. Il est donc heureux qu'une telle réunion conjointe ait lieu en 1972, can elle permet aux congressistes de rencoutrer des collègues éminents durant les quelques jours qui vont suivre. C'est dans cette perspective agréable que, au nom de la Société Entomologique du Canada, je désire souhaiter la bienvenue à tous les congressistes qui ont la bonne fortune de se rencontrer dans une ville aussi attrayante et cosmopolite que Montréal, et dans une aussi belle province canadienne.

In deciding on the title of this address — the role and responsibility of the Entomological Society of Canada — I make no claim for originality: several of my predecessors in office have included aspects of the same topic in their addresses. Thus, in preparing these remarks, I have been helped by what they have said and also, more recently, by the views that have been expressed to me by members, the Coverning Board and the Science Policy Committee of our Society.

As it happens, in 1972 I could hardly have chosen any other topic than this. During the last few years, the Entomological Society of Canada has shown a growing desire to develop a voice in the scientific community and to expand its service function. With members keenly interested in Society activities, and sometimes holding strong opinions about what the Society should, and should not, do, there has been no shortage of excellent proposals for action. The

constraints have been the resources available to carry such proposals through: labour, nearly always voluntary, and nearly always involving people who are already busy with other things; and mency. The problem is of course to allocate these resources in a way that most closely reflects the Society's responsibilities and the priorities that have been identified among these responsibilities.

In assessing the role and responsibility of the Society, we should be onscious of the past - but not confined by it. Our Society, like many of its counterparts elsewhere, began as an informal gathering of keen entemologists whose primary objective was to talk about insects. In 1863, when the Entomological o lety of Canada held its founding meeting, it comprised 36 entomologists, all of them amateurs. The next 40 to 50 years saw the awakening of interest in entomology, the rise of professionalism, and the steady growth of the Society. With the passing of the Destructive Insect and Pest Act in 1910, entomology in Canada entered what Dr. Robert Glen has colled 1 the 'determinative period, when the national and provincial services took shape and entorology hecame more and more service-oriented. After the Second World War, both entomology and the Society showed considerable expansion and recrientation. In 1983, when the Society celebrated its centennial, there were about 500 professionals in the membership of 722. This prompted the late Professor George Spencer, in his historical address on this occasion, to deplore what he referred to as the "passing of the amateur entomologist". On the other side of the ledger, we must note that both the national and regional Societies have benefitted from having a strong professional base, not the least because of the subsidies that they have enjoyed from the governments and universities.

Now, in 1972, this post-war period of expansion of entomology, as well as of other scientific disciplines, seems to be ever. During the last year, direct government subsidies to both the Entomological Society of Ontario and the Entomological Society of Canada have been terminated; and an intense reassessment is in progress wherever public funds are being devoted to scientific pursuits. It is against this background that the Entomological Society of Canada must define its role and responsibility at the beginning of what may be called the fourth period of entomology in Canada: the 'period of consolidation and stabilization'. With this must come a precise and conscious articulation of policy and objectives.

In examining the Society's role and responsibilities, I shall distinguish between two things: the total spectrum of activities that the Society might usefully undertake; and the priorities it should assign among these when resources are limiting (as of course they always are).

Looking first at the full range of its responsibilities. I see these as falling into three categories, not necessarily in this order of importance:

- (I) As an association of scientists and specialists, the Society has a responsibility to the public, including its elected representatives and government officials.
- (2) In the same capacity, it has a responsibility to the scientific c mmunity, internationally but particularly nationally.
- (3) It has a responsibility to the science of entomology and accordingly to those who practise it, whether or not they are paid for doing so.

Looking next at the way in which priorities should be identified. I feelthat the guilding principle has to be this: the Society should be willing at appropriate times to undertake activities in any of these three areas, but it should give preference to those activities that it alone can do, or that it can do best. Thus the Society, appropriately in my view, has taken action in the first area of responsibility by (for example) publishing a non-partisan brief on pesticides and the environment, and by lending support to other scientists in orging the Canadian government to develop a policy that will relate the size of our human population to the resources available to sustain it.

In the second area of responsibility, the Society has been among the first to support umbrella-type scientific associations, such as SCITEC and the Biological Council of Canada, in their critical formative years.

this however in the third area, relating to the discipline of entomology, that our priorities clearly lie; for we are the only hody that is a ailable to plan and act for entomology on a ational scale. With the reduction, or withdrawal, of the subsidies we have enjoyed, this responsibility becomes at once more necessary and more straightforward to discharge. If we accept this challenge we shall have plent to do; so much indeed that now may be an appropriate time to look again at the suggestion made by Professor Frank Morri on in his Presidential Address to this Society in 1987; to appoint a full-time secretary-general to manage our affairs.

In serving the discipline of entomology, I see six kinds of activity as being particularly important:

- (1) Facilitating communication and liaison among entomologists.
- (2) Maintaining, and making available, inventories of entomological programmes, resources and job opportunities.
- (3) Providing entomological information, advice and recommendations to entomologists and non-entomologists.
- (4) Providing encouragement and support to amateur entomologists (not, I suggest, with the intention of personading them to take up entomology as a professio, but of helping them derive the greatest enjoyment from their study of insects).
- (5) Acquiring information about insects and particularly information tion that will allow Canadian insects to be identified.
- (6) Providing continuity and stability for the science and practice of entomology in Canada.

I shall conclude with a few remarks on the last of these six activities — the provision of stabilit and continuity — because I believe that this may prove to be a prerequisite for the Society's survival during the next decade.

We live in a time of repeated (one mi ht almost say 'compulsive?) reappraisal and reassessment. Few would deny the necessity for accasional frank examination of objectives and the benefits that can derive from it. Just as certain is that no body of professionals can prosper when it is continually being threatened with, or subjected to, surgical dissection, fragmentation and re-grouping. As Sir Vincent Wigglesworth once observed: a farmer who wishes to produce a healthy crop does not keep pulling up the plants to examine the routs!

In both Canada and the United States, government agencies that employ large numbers of entomologists have recently been subjected to reorganization and scrutiny in a manner and with an intensity that is not conducive to the prosecution of good long-term programmes. It is likely that similar reviews will soon affect entomologists in universities. Such appraisals are primarily political in origin and can probably not be predicted or prevented — at least not by entomologists! Against this background of uncertainty, entomologists need a body that will safeguard the continuity and stability of their discipline.

If during the years to come, and especially in the near future, the Society can provide this (perhaps in part by acquiring a building of its own), it will have served entomology well, and it will also have made it possible for its everal other responsibilities to be tackled from a firm working base. To do his effectively. I believe that it will have to be adventurous and resolute when deciding bow to allot resources. For this to be so is both timely and appropriate. The Society has become operationally independent at a time when its initiative and leadership are most needed. Its twelfth decade should be an exciting one?

References cited

Glen, H. (compiler) 1956. Entomology in Canada up to 1956. A review of developments and eccomplishments. Can. Ent. 87:290-37t

Holland, G. P. 1968. Entomology in Canada, pp. 7-13. In G. B. Wiggins (Ed.).

Centennial of entomology in Canada 1863-1963. University of Toronto
Press.

Spencer, G. J. 1964. A century of entomology in Canada. Can. Ent. 96:33-59.

POPULATION LIMITATION AND RESOURCE USE

In keeping with the Society's resolution on this subject (Bulletin 2:68), the President sent the following letter.

Dr. II. G. Merriam, Carleton University, Ottawa

CANADIAN COUNCIL OF RESOURCE AND ENVIRONMENT MINISTERS: MONTEBELLO WORKSHOP; 29 OCTOBER TO 4 NOVEMBER 1972 MAN AND RESOURCE PROBLEMS

Dear Dr. Merriam:

At the request of Dr. M. Shaw, President, Biological Council of Canada, and on behalf of the Entomological Society of Canada, I herewith list, in order of priority, the three man and resource problems that I regard as most important in Canada.

- The need to check human population growth with a view to stabilizing the population at a level that will allow a reasonable standard of living to be sustained by future generations with the resources available in the long term.
- 2. The need to conserve non-renewable energy resources.
- 3. The need to establish an authoritative, non-party, advisory group with responsibility for formulating medium and long-range policies for resource management and advising the government accordingly.

Yours sincerely.
Philip S. Corbet
President
Entomological Society of Canada

P.S. 1 attach a statement published by the Society in 1971 that amplifies the summary 1 have offered here.

MINUTES

TWENTY-SECOND GENERAL MEETING



ENTOMOLOGICAL SOCIETY OF CANADA The Queen Elizabeth Hotel, Montreal, Quebec 28 November 1972

The President, P. S. Corbet, called the meeting to order at 1235 hours.

Notice of Meeting

The Secretary informed the meeting that the notice was published in the Bulletin 4(I), April 1572.

Prories

None were declared

Minutes of the Twenty-First General Meeting

The minutes were adopted as published in the Bulletin 3(3):50-54, September 1971. Motion by R. J. McClanahan and D. D. Pond. Carried.

Deceased Members

The meeting paid its respects to the memory of R. D. Bird and W. R. Thompson, Honorary Members, D. E. Gray, Member, and George Gauthier, former Member.

President's Report

A considerable amount of business was conducted last year and we have to terminate this meeting at 1350 his. Furthermore, we are cummitted today to discussing two important matters: the Society's membership in SCITEC and the Biological Council of Canada (BCC); and the proposed Fellowship Class. Therefore, I shall abbreviate the President's Report and ask members to obtain amplification from the Bulletin, in which the actions of the Governing Board will be reported, and (should further information be required) to consult the Secretary, or the chairman of the appropriate committee.

During my term of office there has been a change of Secretary. Mr. D. G. Peterson, who had been Secretary of the Society since 1967, resigned at the beginning of 1972 and was replaced in March 1972 by Professor D. M. Davies. During the intervening period Drs. E. C. Becker and J. J. Cartier, with the belp of Mrs. K. L. Deane, maintained continuity in this part of the Society's operations.

The Coverning Board has met three times: on 28 August 1971 in Victoria, B.C.; on 23 and 24 February 1972 in Ottawa; and on 28 November

1972 in Montreal. In accord with the Board's policy I, as President, have attended three annual meetings of affiliated societies: that of the Entomological Society of Ontario in Ottawa (1971) and at Chalk River (1972), and that of the Entomological Society of Quebec at Laval (1971). Also as your representative, I attended the 14th International Congress of Entomology in Canherra, Australia in August 1972. In the course of this, on the Buard's instruction, I delivered a formal letter of greeting to the President of the Coogress and of the Entomological Society of Australia, Dr. D. F. Waterhouse; and on my way to and from the Congress, I delivered similar letters to the President of the Entomological Society of Japan, Dr. S. Asahina, and to the President of the Entomological Society of New Zealand, Mr. A. D. Lowe. The Society has received a cordial letter of ucknowledgement from the Entomological Society of Japan.

As the Treasurer's report indicates, our Society's financial condition is healthy.

Both the Society's publications, The Canadian Entomologist and the Bulletin, have flourished. To a growing extent the need for less formal, more popular articles on entomology is being recognized. The possibility that the Bulletin might help to meet this need has been increased now that it is to be received regularly, and scanned, by the Science Writers' Association. However, it is also recognized that more than this will have to be done if entomology and its importance are to be presented effectively to the public. The activities of the Student Encouragement Committee may be expected to contribute towards this objective, albeit indirectly. The Board has approved a system that permits greater flexibility in the allocation of funds among regional societies.

From I January 1973, the Soci ty's office will be at 1320 Carling Avenue, Ottawa. The Society has enjoyed the use of office accommod tion in the K. W. Neathy Building at the Central Experimental Farm for many years, a subsidy that has greatly helped the Society financially and in other ways. This amenity can not be provided after 1972. When it learnt of this, the Society had to make alternative arrangements promptly and so decided to sign a two-year lease for a rented office shared equally with the Cenetics Society of Canada. The monthly cost of rent to our Society is \$112.50. During the next year the Finance Committee (besides recommending a long-term investment policy for the Society) will emmine the financial feasibility of the Society purchasing a small building, probably close to the Experimental Farm in Ottawa some rooms of which could be used by our Society and others rented to one or more other Societies. This would hopefully provide continuity and stability to the Society's operations a contribution to be valued in these days of uncertainty and reassessment. Such an action would also reinforce the Society's anticipated need, before long, for a full-time manager.

The Board decided to commission inscribed miniatures of the Society's badge and to present them, as a token of appr ciation, to members who had served as President, or on the Managing Council. Such Service Award Shields have been prepared for all eligible members since the national Society was reconstituted in 1950, and have been presented to the widows of the five such members who are no longer alive to rec ive them. Similar shields, but lacking an inscription, will be available to other members who wish to purchase them.

Society membership is relatively stable. Since we want our membership to grow, I ask all members to take the opportunity to note why certain

individuals have left the Society and why other potential members have not joined, and to inform the Membership Committee.

The employment situation for entomologists in Canada and North America continues to deteriorate. Our Employment Committee is working hard to see that this situation is not worsened by poor communication.

The Science Policy Committee is enlarging its responsibilities. The establishment and growth of SCITEC and BCC has placed increasing demands on the Society for participation in their meetings and in the assessment of reports on the nation's scientific organization. The Committee is presently preparing a rief (similar in nature and scope to the one entitled Pesticides and the Environment) on the role and responsibility of our Society. My choice of this topic for the Presidential Address was related to this action; the brief is expected to be completed within the next year.

The Board has been reviewing and revising the By-Laws. Several changes were agreed upon by the Board earlier this week. In summary these changes achieve three things: (1) they ensure that By-Laws cannot be changed until after the changes have been discussed at a general meeting. (2) they formalize the ways in which stooding committees are nominated and report to the Board and (3) they define the constitution and responsibilities of the Executive Committee, which would now comprise the President. Oresident-Elect and Past-President. An additional change the establishment of an Emeritus Member class, was approved by recent letter hallot. This class provides for retired members who feel that they can no longer continue their membership. As Emeritus Members they will receive the Bulletin free, but not The Canadian Entenologist, and will be encouraged to publish in both; they will also receive notices of meetings.

The Board has been actively considering the deposition of appropriate material in the Public Archives of Canada. A decision will probably he reached on 30 November 1972, after an official from the Public Archives has addressed the Board. I ask that members who have opinions on this matter, or know of appropriate material, inform Directors before 30 November 1972.

The questions of the Society's continued membership in SCITEC and BCC, and the proposal to establish a Fellowship Class, will now be dealt with as separate items.

(As a prelude to discussion on the first item, the President welcomed and introduced the Vioc-President of SCITEC, who then addressed the meeting. No motion for acceptance of the President's report was asked for or offered at this time and will therefore be entermined at the Twenty-Third General Meeting.)

SCITEC

Dr. M. P. Bachynski, Vice-President of SCITEC, explained the history and objectives, and recent initiatives and achievements of SCITEC, after which he was thanked by the President.

Drs. B. N. A. Hudson, M. P. Bachynski and E. J. LeRoux explained the need and purpose of the increased levy on member societies from 10¢ to \$1.00 person year. The membership of SCITEC is about 20,000 and the fees are used to Pay for a secretariat, conferences and for the liaison with government as well as with societies, universities and industry.

It was moved by E. G. Munsoe, seconded by G. E. Ball, that our Society should continue its support to the Biological Council of Canada (BCC)

and The Association of the Scientific, Engineering and Technological Community of Canada (SCITEC) at the cost now forecast and that it make every effort to maintain and increase the effectiveness of its representation on both these bodies. Carried (31 for, 5 against, 2 abstained).

Members, if interested, should contact the Secretary for copies of the brechure "SCITEC - why should your organization join SCITEC?".

Auditors' Report

At this time of year no auditor's report is available. E. C. Becker, Treasurer, indicated that the Society was financially healthy, more so because it was budgeting for an imminent rise in printing charges for the Society's journal.

Fellowships

On the instruction of the Governing Board, following the meeting in Victoria on 23 August 1971. P. S. Corbet and E. J. LeRoux prepared a draft model for implementation for consideration by the Board at its next meeting. After discussion of this model at the Board meeting on 24 February the model was revised by J. A. Downes and E. C. Becker in anticipation of members being asked to vote on its acceptance by mail ballot, lo the event, however, on account of the widely differing views expressed to the Board on this matter, members were instead asked to vote, by mail ballot, on the acceptance in principle of the Fellowship class as exemplified by the revised model. This ballot showed that a substantial majority of those voting favoured Fellowship in principle (279 for, 93 against, 23 blank, 2 spoiled).

The President asked for discussion on this subject. Opinions were expressed both for and (in some cases strongly) against, the establishment of Fellowships. These opinions, together with those expressed earlier in response to the revised model, will be considered by the Coverning Board at its meeting on 30 November 1972.

Electron

The Secretary reported that he had been informed by F. j. H. Fredeen, Convenor, Election Committee, on 20 July 1972, that the successful candidates were J. J. R. McLintock, President-Elect; B. N. A. fludson and W. J. Turnock, Directors at-Large (1972-75).

Honorary Membership

The election of Professor Herbert H. Ross as Honorary Member had been strongly supported by the members. The President welcomed Dr. Ross and presented him with the Society's Honorary Membership Certificate.

Installation of New President

The chairman invited D. K. McE. Kevan, the new President, to take the chair. Dr. Kevan then presented Dr. Corbet with one of the Society's new Service Award Shields.

Installation of New Officers

Dr. Kevan introduced the President-Elect and the two newly-elected Directors-at-Large.

Auditors

It was moved by D. C. Eidt, seconded by B. N. A. Hudson, that Geo. A. Welch and Company, Ottawa should be re-appointed as auditors.

Committees and Appointments

The President because of the pressure of time, announced only changes in the appointments but indicated that the minutes would include the complete list.

Executive Committee:

J. R. McLintock, P. S. Corbet L.-C. O'Neil, Sherbrooke Archivist: Assistant Editor (Bulletin): D. C. Eidt, Fredericton Member, Editorial Board (1972-6): C. Yoshimoto, Ottawa J. E. H. Martin, Ottawa Chairman, Common Names Committee: Chairman, Election Committee: K. G. Davey, Ste. Anne de Bellevue Chairman, Employment Committee: S. R. Loschiavo, Winnipeg Chairman, Finance Committee: Il. M. Prentice, Ottnwa Chairman, Gift Subscription Committee: II. J. Teskey, Ottawa Chairman, Honorary Membership

Committee:
Chairman, Insect Colonies Committee:
Chairman, Membership Committee:
Chairman, Nominations Committee:
Chairman, Program Committee:
Chairman, Science Policy Committee:
Vice-Chairman:

Chairman, Student Encouragement Committee: G. T. Ilarvey, Sault Ste. Marie J. S. Kelleher, Ottawa R. W. Stark, Moscow, Idahn P. S. Corbet, Waterloo W. O. Haufe, Lethbridge W. F. Baldwin, Chalk River B. N. A. Hudson, Ottawa

D. K. McE. Kevan (Chairman)

R. C. H. Downer, Waterloo

Resolutions

The Secretary indicated that there was a joint Resolutions Committee of the three Societies (Quebec, Canada and America) on which D. M. Wood of our Society was serving. Therefore, no resolutions were being proposed at this meeting, but rather would be included with Resolutions proposed at the General Meeting of the Entomological Society of America on Thursday morning. However the members were given the opportunity of presenting resolutions from the floor or of giving them to the Secretary so that they could be proposed on Thursday morning. None were forthcoming.

Twenty-Third Meeting

The Secretary announced that the Society would meet with the Entimological Society of Alberta at Banff on 1-5 October 1973. Co-chairmen of the 1973 Program Committee are W. O. llaufe (ESC) and N. D. Holmes (E. S. Alberta).

Achievement Award

J. J. R. McLintock, Chairman, Achievement Award Committee, requested numbers to send their nominations to him, marked "Confidential, Achievement Award". The announcement is to be repeated in the Bulletin. The names of the two Assessors can be obtained by writing to him or the Secretary. The deadline for nominations will be 5 February 1973.

Other Business

The Chairman asked whether any members wished to continue discussion of any matters covered at the Twenty-Second General Meeting in a second session later in the week. None expressed the wish to do so: The Chairman adjoorned the meeting at 1400 hours.



ENTOMOLOGICAL SOCIETY OF CANADA MEDAL FOR OUTSTANDING ACHIEVEMENT IN CANADIAN ENTOMOLOGY

Members of the Society are invited to nominate individuals whom they regard as eligible for this award. Nominations should be sent to J. McLintock, 197 Baldwin Cresc., Saskatoon, Sask. S7H 3M5, in an envelope marked "Confidential", and should comprise: (1) the name and address of the nominee; (2) a statement of relevant achievements; and (3) the name of the nominator and at least one seconder. To be considered by the Achievement Awards Committee nominations must bear a postmark no later than 5 February 1973.

The following conditions govern this award:

- ... Outstanding contributions shall be judged on the basis of
 - (a) superior research accomplishment either 38 a single contribution or as a series of associated endeavours and which may be either in entomology or a related field where the results obtained are of great consequence; or
 - (b) dedicated and fruitful service in the fields of Society offairs, research administration, or education.
- No more than one sward shall be granted per year but, where circumstances warrant, more than one individual may be mentioned in a single award.
- Recipients need not be members of the Society providing their contribution is judged to have a major impact on entomology in Canada.
- The medal may be granted on different occasions to the same recipient but for different contributions to entomology in Canada.

FUTURE ANNUAL MEETINGS

The 1973 Annual Neeting will be held at Bunff, 1-5 October, with the Entomological Society of Alberta. In 1974 the meeting is planned for Halifax with the Acadia Society, and in 1975 in Saskatchewan with the Saskatchewan Society. There k an International Congress in 1976, at Washington D.C. and the E.S.C. meets in London, Outario, with the Ontario Society and the Eastern Branch E.S.A. In 1977 we return to Manitoba. There are plans afont to meet with the Canadian Botanical Society in 1975 or 1977.



Officers and Governing Board 1971-1972



OFFICERS AND GOVERNING BOARD 1971-72

Front row: J. E. McFarlane, Director-at-large; H. F. Madson, at large; D. K. McE. Kevan, President-Elect, P. S. Corbet, President, D. M. Davies, Secretary; E. C. Becker, Treasurer; C. T. Harvey, Ontario; W. T. Cram, British Columbia.

Back row: C. R. Harris, at large; Ray F. Morris. Acadian; P. S. Barker, Manitoba; G. S. Cooper, at large; W. O. Haufe, Alberta; L. L. Pechuman, at large; J. A. Downes, at large; W. S. McKinlay, Saskatchewan. Absent: W. Smirnoff, Quebec; W. F. Baldwin, Past-President.

OFFICERS AND GOVERNING BOARD 1972-73

Front row: B. N. A. Iludson, Director-at-large, E. C. Becker, Treasurer; J. R. McLintock, President-Elect, D. K. McE. Kevan, President, P. S. Corbet, Past-President; D. M. Davies, Secretary; M. E. MacCillivany, Acadian.

Back row: K. S. McKinlay, Saskatchewan; J. E. McFarlane at large; C. R. Harris, at large; L. L. Pechuman, at large; P. S. Barker, representing V. Hihlahl, Manitoba. W. O. Haufe, Alberta; W. T. Cram, British Columbia; C. T. Harvey, Ontario; J. A. Downes, at large; W. J. Turnock, at large. Absent: W. Smirnolf, Quebec.

ACTIONS OF THE GOVERNING BOARD 26 NOVEMBER, 1972

Publication of Symposia

Noted that Dr. C. C. E. Scudder has most of the symposia of 1971 ESC meeting back from reviewers and intends to suhmit them to the Canadian Entomologist with normal page charges to authors, and that no arrangement has been made to publish symposia of the 1972 meetings.

Service Award Shields

2. Noted that 50 hand-painted replicas of the Society's insignia were mounted on wooden shields for presentation to 30 past presidents and past members of the Managing Council, or, if deceased, to their widows.

Insect Photo Salon

3. Recommended that, although participation by members has been low in the past two years, a Photo Salon should be held at the 1973 meetings with greater publicity.

Popularizing Entomology

- 4. Noted that liaison had been established with this Association and that some of their members wish to receive eur Bulletin.
- Recommended that more popular articles in the Bulletin on important entomological achievements will aid in publicizing our science through science writers.
- Dr. K. S. McKinlay suggested that members he encouraged to write more popular articles on entomology in magazines, such as: Nature Canada, The Beaver and Weekend Magazine.

New Headquarters

- 7. Noted that the Society had been asked to vacate its rooms in the K. W. Neathy Building, Central Experimental Farm, Ottawa by the end of 1972, and ratified a two-year rental of office space at 1320 Carling Avenue near our former locatio, with the space and reot being shared equally with the Genetics Society of Canada.
- Recommended that the feasibility of buying a bouse be explored.

Assistant Editor

9. Directed that this position be henceforth called Managing Editor.

Achievement Award

 Approved a proposal for new "terms of reference" for the Achievement Award prepared by Dr. Kevan.

Employment Committee

 Noted that advertisements in the Bulletin have resulted in some positions being found but that we should advertise as well through trade associations, eg. Vegetable Growers' Association.

Membership Committee

12. Urged Regional Directors to find out why former members in their area had dropped out and to rectify any misconceptions about the Society that are held by entomologists.

By-Laws Amendments

- 13. Proposed changes which deal with safeguards allowing the general membership at annual receipts to discuss Governing Board injustives before they appear on a mail ballot, and with formalizing the way in which standing committ s are appointed, and with formalizing the Executive Committee comprising the President, President-Elect and Past-President.
- Authorized Mr. J. A. Downes to make any further needed changes for decision at the next Board meeting.
- 18. Agreed that any members wishing to suggest chang s in the By-Laws write to Mr. Downes or the Secr tary.

Future Meetings

16. Asked Mr. J. A. Downes to discuss with the Canadian Botanical Association the best year and arrangements for a joint meeting after 1973. And decided to publish proposed charges in the Bulletin at least two months before the 1973 Annual Meeting, where they will be discussed.

Emeritus Members

17. Approved that Emeritus Members, if they wish, receive the Bulletin free and notice of Annual Medings, and be encouraged to contribute articles for the Society's journals.

ACTIONS OF THE GOVERNING BOARD 30 NOVEMBER 1972

Appointments

- 1. Managing Council: E. C. Becker, Treasurer; D. M. Davies, Secretary; D. P. Pi lou, Editor.
- 2. Approved Presidential appointments. Executive Committee: D. K. McE. Kevan, President; J. J. R. McLintock, President-Elect P. S. Corbet Past-President Assistant Editor (Bulletin), D. C. Eidt. Editorial Board, C. Yoshimoto to replace W. C. McGuffin. Archivist, L.-C. O'Neil. Committee Chairmen: Achievement Award, J. J. R. Mc-Lintock; Membership, R. W. Stark (to be asked); Common Names of Insects, J. E. II. Martin; Election, K. C. Davey; Employment, S. R. Loschiavo; Finances, R. M. Prentice; Gift Subscriptions, H. J. Teskey; Honorary Membership, G. T. Harvey (pro tem.); Insect Colonies, J. S. Kelleher; Nominations, P. S. Corbet; Program 1973, W. O. Haufe; Student. Encouragement, R. G. H. Downer; Committee on Publicizing Entomology, K. S. McKinlay; Science Policy, W. F. Baldwin. Representatives: Canadian Committ on Water Pollution, A. L. Hamilton; Canadian Couocil on Animal Care, A. E. R. Downe; G. S. A. Committee on Common Names for Pest Control Chemicals, L. A. O. Roadhouse; ESO-ESC Committee on Exchanges, J. F. McAlpinc, Biological Council of Caoada, B. N. A. Hudson, D. B. Oliver and alternate R. M. Prentice; SCITEC, R. M. Prentice.

Science Policy Committee

 Because of the increasing importance and work of the Committee, added B. N. Anne Hudson as Vice Chairman, and our B. C. C. and SCITEC representatives and alternates.

Finance

- Approved a Budget for 1973 that anticipates a surplus of \$13,203.00.
- 5. Approved a President's Discretionary Fund for 1973 of \$750.00 to be used for expenses incurred or authorized by the President acting for or on behalf of the Society.
- Approved expenses in attending ESC meetings for Gold Med I Award winner and newly-elected Honorary Members (including spouses) and of Governing Board thembers, as needed.
- 7. Authorized the Treasurer, with the approval of the Finance Committee, to increase the Society's investment reserve by up to \$5,000.00.

Achievement Award

8. Agreed that deadline for submission of nominations be 5 February 1973.

Archives

9. Approved the deposit of appropriate material with the Public Archives of Canada subject to an arrangement acceptable to the Governing Board.

Fellowships

10. Recognizing that a large majority (over 70%) of members voting in the recent mail ballot supported the principle of Fellowships, but wishing to avoid potentially divisive issues within the Society, postponed until its first meeting in 1974, further decisions regarding the adoption or rejection of the proposed Fellowship class of membership.

Bulletin

- 11. Recommended that Regional Societies be encouraged to send more information to the Bulletin on history, activities, achievements, members' deaths, or pending meetings.
- 12. Recommended that members be encouraged to send popular articles on research, accomplishments of graduate students, biographies, histories of subdisciplines of entomology and book reviews.

CANADIAN ENTOMOLOGIST 100 YEARS AGO

Text Caterpillars — Apropos of the scarcity of the Tent Caterpillars this season: About ten days ago, an acquaintance informed me the the fences and sidewalks near the residence of Horace Yeomans, Esq., on Bridge Street, West Belleville, were covered by an immense swarm of Caterpillars. As I could not well go thither at that time, I sent one of my boys, who soon brought me about twenty specimens of the Forest Tent Caterpillar (Clisiocampa Sylvatica.) — Prof. Bell (4:199)

ROBIN THOMPSON — A KINDRED SPIRIT

Antony Downes, in the September issue of the Bulletin, has given a full and sympathetic account of Dr. W. R. Thompson's professional career and of his many contributions to science.

The califor of the Bulletin has asked me to write something of my long and close friendship with Robin and especially of our boyhood days as budding biologists.

My brother A. C. (Art) Baker and I spent our boyhood years, in the late ninetics, with our parents in the village of Sparta, in Elgin County on the North Shore of Lake Erie. In the fields, woodlots, ponds and streams of this area, we found much to stimutate our interest in nature. We collected insects, birds' nests and eggs and plants and maintained a pen of various species of turdles. We even tried some amateur taxidermy with dead birds or manunals which when found, were still in a coodition to be salvaged. In all this we were encouraged by our father, J. J. Raker, a Baptist Minister who was himself a keep naturalist.

At the turn of the century we moved to London, Ontario where our father become principal of a private girls' school, there Art and I soon found a kindred spirit in Robin Thompson. Like ourselves, he was much interested in nature and was already collecting plants and insects.

At that time the headquarters of the Entomological Society of Optario, which was then the national society, were in London in rooms in the old Public Library building, there the collections and library of the Society were housed. Dr. C. J. S. Bethune was curator of the collection and editor of the Canadian Entomologist, Robin Thompson, my brother Art and myself along with another young friend, who later fell from grace and went into chemistry, spent much of our spare time at the Society's headquarters. Here we studied the collections and got our own specimens identified.

In 1890 the Society had given permission for the establishment of local sections in London for the study of various fields of science. By the time of our arrival in London, four sections — Botanical, Ornithological, Geological and Microscopical — had been formed and were functioning well. In 1903 the Ornithological section become "The Mellwraith Ornithological Club" which is still functioning as "The Mellwraith Field Naturalists Club" of London.

Included in the local memberships of the Society, and in these sections, was a rather remarkable group of amateur scientists. Antony Downes has referred to several. John Dearness, who was principal of the Normal School in London, was a hotanist of note and had an international reputation as a mycologist. Dr. Wolverton was one of the leading spirits in the Geological section and Saunders, fath r and sons, were active in the Ornithological section W. E. Saunders become probably Canada's greatest amateur ornithologist. All of these men took an interest in the Society as a whole as well as in their particular sections. The photograph of those in attendance at the 50th Anniversary of the Society held in Guelph she is John Dearness and W. E. Saunders. All of these and other local members of the Society, including Dr. Bethune, did moch to encourage Hobin, Art and myself in our search for knowledge about the world of nature.

One local member, whom I should mention in particular, was John Bice who aided greatly in the development of our interest in Entomology. John was a patrol-man and lamp-trimmer for the London Electric Co. At that time

the streets were lighted by large carbon are lamps hung at the street intersections. The big carbons would frequently sputter and fuse. It was John's job to patrol the streets at night and when he found a lamp that needed adjusting he would lower it by a live from a nearby pole. He carried an insulated stool in his cart. He stood on this white he adjusted the carbons. John was a keen student of Lepidoptera and probably had the most complete collection of moths of that part of Ontario. The light from the big are lamps flooded the street corners, and not only moths, but insects of many other groups gathered on the trees and poles about the corners and even on the roadway itself. These street corners became to us a collector's paradise. John would trick one or two of us up at our homes or we would meet him by arrangement, when he was patrolling the streets with his horse and cart. We would be equipped with net, killing bottles and collecting boxes. While John was checking the lamps, and doing a bit of collecting on his own, we would be covering the corner and the area adjacent to it. Before it was too late at night, John would arrange his patrol so he could drop us at or near our homes.

When I look back at it now, I realize how fortunate we, as youngsters, were to be guided and counselled by such an unusual group of amateur scientists. It was not long until the three of us had decided that our lifetime work would be in the field of Biology. The idea that one could make one's living working with insects and other animals seemed too good to be true.

In 1903 Or. Bethune went to Guelph as head of the Department of Entomology and Zoology at the Ontario Agricultural College. At that time Guelph was the only place in Ontario where one could major in an undergraduate programme in Entomology. Two years later, Ro in Thompson followed Dr. Bethune to Guelph and entered with the class of 1909. Two years later Art and I followed and entered O.A.C. with the class of 1911.

Antony Downes has dealt fully with Robin's professional career from graduation on. Like Robin, my brother Art Baker, went with the U. S. Burean of E tomology while I remained at Guelph.

I should point out that Robin never forgot the early days in London or what the Society and its members had done for him. He always retained his membership in the Society. After his return to Capada he took on the editorship of The Canadian Entomologist while it was still being published by the Entomological Social of Ontario. He continued the editorship after the formation of the Entomological Society of Canada, which then took over the direction of the publication of the Journal, until his retirement in 1958.

When I was president of the Entomological Society of Canada, I received a letter from Dr. Riley, the permanent secretary of the International Congress of Entomology, asking if Canada would host the next Congress meeting. This meeting had been scheduled for Brazil but Brazil was unable to carry out the commitment. Although the United States had offered to play host, the officers of the Congress were not anxious to occup that invitation because it was feared that delegates from behind the Iron Curtain would not be able to attend. The first person with whom I discussed the request was Ro in Thompson. He agreed that if we could arrange the matter with government, we should issue the invitation. When the executive of the Society, after our consultation with government, agreed that I should extend the invitatio, Ro in Thompson was our first and unanimous choice to chair the Congress as our representative. We all know how he carried out his duties as Chairman of the Tenth Congress held in Montreal in 1950.

It is interesting to observe that Robin's first interest in entomology was developed and fostered by the Entomological Society of Ontario and its

members. And that one of his last major activities in this field, was on behalf of the Entomological Society of Canada which had succeeded the Entomological Society of Ontario as the national body, when he chaired the International Congress.

In the death of Robin Thompson, the world has lost an outstanding scientist. Canada has lost an outstanding son and some of us have lost a friend-ship of many years standing.

A. W. Baker

THE SOCIETY MEDALLION

Miniatures of the Society plaque have been made for presentation to former Presidents, Secretaries, Treasurers, and Editors as an action of the Coverning Board on behalf of the members (Bulletin 4(1):14). The plaque, of oak, bears the Society medallion in colour, which is Gylloblatta superimposed on the maple leaf, and the name of the recipient beneath. At an informal reception the evening of 29 November, the President, Dr. Kevan, presented pluques to the former Presidents B. Hocking 1959-60. Mrs. Elizabeth Arnason for the late A. P. Arnason 1960-61, A. W. A. Brown 1961-62, E. G. Munroe 1963-64 (also former editor 1958-61), F. O. Morrison 1966-67, J. W. McB. Cameron 1967-68, A. S. West 1968-69, and E. J. Le Roux 1969-70. Plaques will be sent by mail to those former officers, not present at the Annual Meeting.

HONORARY MEMBERS

The Honorary members of the Society are A. W. Baker, B. E. Balch, E. M. Duporte, G. R. Hopping, W. N. Koenan, A. D. Pickett, J. C. Rempel and H. H. Ross.

The By-Laws permit the election of two more Honorary Members by the next mail ballot. Any five active members may submit, for consideration by the Honorary Membership Committee, the name of a member who has made an outstanding contribution to the advancement of entomology. The Committee may nominate members for election to Honorary Membership.

Submissions, accompanied by supporting statements, should be sent to the undersigned by 5 February 1973 at the latest, for forwarding to the Committee. Previous submissions will not be considered by the Committee unless they are resultinitted.

Douglas M. Davies, Secretary

REPORTS OF EDITOR COMMITTEES AND REPRESENTATIVES

REPORT OF THE EDITOR

During the 12 months 1 Sept. 1971 to 31 Aug. 1972, 224 manuscripts were received. The number of papers published in The Canadian Entomologist was 213 producing a total of 2000 printed pages. The monthly number of pages is now 176 in a standard issue. Six Memoirs were received and seven published for a total of 994 printed pages. There appears to be a reduction in the number of Memoir manuscripts being produced but an increase in the number of papers being prepared for The Canadian Entomologist. This no doubt reflects fewer funds available for publication in many institutions.

There is some difficulty with book reviewers. Books sent to prospective reviewers are readily accepted but often the promised review is not received. All who have promised a review, please send it to me or to the Editor of the Bulletin as soon as possible, or to return the book to me.

I must again praise both the exceptional competence, and exceptionally hard work, of our Staff Editor, Miss Margaret McBride. Last year my recommendations for her promotion, and corresponding increase in salary, were held in abeyance, I hope the Directors will now see fil to accept my recommendation that Miss McBride be immediately promoted to the equivalent status of an Information Services Officer, Level 3 in the Public Service of Canada. The promotion should be backelated to Nov. 1971, the date 1 originally suggested her promotion become effective. I may the Directors not to be parsimonious in this matter. The Society has an extremely valuable worker in Miss McBride. She has had not only many years of experience in editorial work, but also a lifetime's experience in editing entomological manuscripts. We can ill afford to lose her.

D. P. Pielou

REPORT OF THE COMMITTEE ON INSECT COLONIES

The most recent list was published as a supplement to the Bulleti'n 3(2), 1971 and the next list is proposed for 1973.

Recommendations:

In the interests of economy, the Coverning Board should consider publishing the list separately, possibly mimeographed, and available on request but free-of-charge to members, cooperators and perhaps a limited number to others.

Additional typing and clerical services should be provided to simplify procedures in gathering information from cooperators e.g. preparing index cards, filling out form letters.

The committee should include an insect taxonomist to provide comments of a general taxonomic nature.

J. S. Kellcher

REPORT OF THE ASSISTANT EDITOR (BULLETIN)

The Bulletin has stabilized at about 100 pages per volume and the flow of material is fairly constant and the copy good. Very little has been rejected and little rewriting has been necessary. A new membership list was published as a supplement to volume 4 number 1.

There has been disappointingly little communication with committees, with the exceptions of the Gold Medal and Employment Committees. Only to items of publicity for the Annual Meeting were received; others were copied from the Bulletin of the E.S.A.

Two articles of indirect relevance to the Society were submitted to the Bulletin and published without my knowing they had also been submitted to the Bull. But. Suc. America. Because of the wide overlap in subscribers, this could have decided if they were acceptable.

Arrangements were made by the Executive Committee to have Canadian science writers receive the Bulletin. To make the Bulletin of more interest and use to science writers, and thus to the Society, steps have been taken to include summaries in popular but dignified style of scientific articles of Canadian interest or of cosmopolitan interest published by Canadians.

I would ask for the continued support of the Executive and Board of Directors, that committees and members take advantage of the possibilities the Bulletin offers for the dissemination of information among the membership, and that authors of scientific articles consider submitting popular but dignified summaries for publication in the Bulletin.

Becommendations:

- 1. That each year a group photograph of the Executive and Board of Directors be taken for the Bulletin and the Archives.
- 2. That the Bulletin be mentioned in appropriate places in the notes on the inside front cover of The Canadian Entomologist.
- 3. That a volunteer be found to assist me by seanning Canadian journals containing papers on entomology and foreign journals in which Canadian entomologists commonly publish and inviting the authors to subtuit to the Bulletin, popular summaries of articles he feels appropriate.

D. C. Eidt

CANADIAN ENTOMOLOGIST 100 YEARS AGO

"CREAT ENTOMOLOGICAL Loss — Mr. Couper, the Canadian Entomologist, who left Montreal on the 10th of May last to collect butterflies and moths in Labrador, has had his splendid collection of rare specimens destroyed by some of the Indians, who took revenge in this way for some statement made by him in the Quebec Chronicle, about seven years ago, re arding the destructive practice of the tribe in spearing salmon on the then spawning grounds." (4:179)

REPORT OF THE ARCHIVIST

Activities in 1971-72 were centered around the reception of numerous items to be added to the collection, and correspondence regarding the eventual disposition of the Archives.

Additions

A complete set of the CDA Research Branch Entomology Newsletter, from D. G. Peterson, past-secretary of the E.S.C.

A series of past issues of The Canadian Entomologist, Memoirs of the E.S.C. and Bulletin of the E.S.C. set aside by E. C. Becker, treasurer of the E.S.C., and presently held in Ottawa, until pickup can be arranged.

Inclusion of the Archives on the mailing list for the above-mentioned publications: current numbers have been received for the past year.

Pictures of the old Harrow, Ontario, CDA Research Station buildings, and a photograph of staff located in K. W. Neatby Building, Ottawa, (1948-1950), from Dr. C. D. F. Miller.

Brochures for the E.S.C. Annual Achievement Award, from Dr. P. S. Corbet, President of the E.S.C.

Original design of E.S.C. presentation plaques, and original design of plaque presented by the E.S.Q. to the E.S.C., on the occasion of the E.S.C. Centennial (1963), from Dr. D. K. McE. Kevan, President-Elect of E.S.C.

Loans

From the Archives to the Chemical Control Research Institute, Canada Department of the Environment, a series of five display panels pertaining to the use of aircraft in the application of chemicals for insect control; outstanding since the spring of 1969.

Carrespondence

With J. A. Downes of the CDA Research Branch, Entomology Besearch Institute, concerning the inclusion of material relating to the Xth International Congress of Entomology, Montreal, 1956; this material could be included in the Archives, at the suggestion of Mr. Downes; final discussion and arrangements are still pending.

With Ray F. Morris of the Acadian Entomological Society concerning the inclusion of historical material from the AEC, in the Archives. Arrangements with regard to this proposal are still pending.

Deposition of the Archives of the E.S.C. in the Public Archives of Canada

This subject was first brought up by P. S. Corbet, President, early in 1972. Correspondence was exchanged on the subject which involved an exchange of opinions between Dr. Corbet and the Archivist, and also other informed members of the E.S.C., namely j. A. Downes, D. K. McE. Keven, D. M. Davies, G. P. Holland, and Miss Nan Bright Sussmann, a librarian of the CDA Research Branch.

There is a concurrence of opinion, among these people, to the effect that the Public Archives of Canada should perhaps become the normal repository

of the Archives of the E.S.C. However, time has failed to establish firm contact with people from the Public Archives on this subject, and it is opinion that in active exchange of views should be initiated with these people, in order to darriy positions on both sides, before a final decision is made.

Louis C. O'Neil

REPORT OF THE EDITORIAL BOARD

At the 1971 meeting of the Governing Board in Victoria, the Editorial Board was asked to review the duties of the Editor and Assistant Editor. This was done and submitted to the February 1972 meeting of the Governing Board. It was recommended that Assistant Editor, Miss Margaret McBnide, receive an increase in salary and that her title be changed to Managing Editor. The matter was not resolved at the February Governing Board meeting and the task of determining a salary appropriate to Miss McBnide's duties was referred to the Finance Committee. The Editorial Board feels that a decision on Miss McBnide's salary and title has been unduly delayed and should be resolved as soon as possible.

During 1971 and 1972, three requests were received for waiving page charges on manuscripts submitted to The Canadian Entomologist. The Editorial Roard reviewed each request, approved two of the applications and rejected one. This method of resolving requests for waiving page charges seems to be working well and relieves the Editor of the responsibility for such decisions.

A problem on quality of illustrations arose following the May issue of The Ganadian Entomologist. The problem was corrected by the Editor and Assistant Editor and did not require action by the Editorial Board,

The subject of publication of symposia in The Canadian Entomologist was discussed at the February 1972 meeting of the Governing Board. It was decided that the program committee responsible for symposia or invited papers at anoual meetings should decide whether it is desirable to publish such papers and take the responsibility for requesting publication. It was also pointed out that the problem of financing lies with the organizing committee. This is an important decision, as page charges were questioned by Dr. G. G. E. Scudder relative to the publication of a systematics symposium presented at the 1971 Victoria meeting. Dr. Scudder was informed that page charges would not be waited.

H. F. Madsen

B.C.C. REPRESENTATIVES

Members comment on the policies expressed in the Science Gouncil Reports numbers 17 and 18 reviewed in this issue and number 16 in Bulletin 4(3)-58, would be welcomed by your B.G.C. delegates Drs. Anne Hudson and D. R. Oliver.

REPORT OF THE FINANCE COMMITTEE

At a meeting of the Governing Board of the Entomological Society of Canada on 24 February 1972, the Finance Committee was asked to examine and report on the following items: I. Title, salary, and job specifications of the assistant Editor, Entomological Society of Canada. It was recommended that "the Committee do its best to equate our employee's salary with the government scale for equivalent services noting that the cash value of fringe benefits, e.g. pension and medical insurance not covered by the Society, be included and reflected in the salary". 2 Long-term investment policy of the Society to include "the possibility of acquiring a building for the E.S.C. or sharing facilities with similar societies. The objective is that the Society make provision to operate independently of any outside assistance such as is now provided by Canada Department of Agriculture."

I. Title, job specifications, and salary of the Assistant Editor:

The Finance Committee called for a definite statement of duties for the Assistant Editor following the standard job description format used by the federal service for classifying positions in the Information Services Category. The job description as prepared by Miss McBride was processed through the Classification Division, Personnel Branch of the Department of the Environment and the recommended level of the position was IS-2.

The salary range of the IS-2 as of 25 September 1972 was \$12,009 — \$13.648. The Finance Committee recognizes that the position of the Assistant Editor does not carry with it the federal service benefits of hospitalization and superannuation and puts forth the following recommendations:

Recommendations:

That the salary of the Assistant Editor he set at the top of the IS-2 level (\$13.648) with an additional 5% in lieu of normal federal benefits and overtime allowances for an annual total salary of \$15,149 as of 1 January 1972.

That annual economic salary revisions for the Managing Editor be the same as those accepted by the federal service on the basis of collective bargaining for the IS Group.

That the title of the position be changed to Managing Editor to allow for additional duties and "house-keeping" arrangements that will probably be invulved with the move to independent quarters (see 2 below).

2. Long-term investment policy and office accommodation:

The Committee's activities in this area revolved around the need to find alternative accommodation by January 1973 for the ESC editorial and office staff now occupying space in the K. W. Neatby Bulding in Ottawa. In a letter dated 19 September 1972, the Committee was instructed by the President to "assess the Society's position, consider comments from members of the Board, and to prepare recommendations for action". At that time it was suggested that the recommendations would be scrutinized by the Board and acted on at the Annual Meeting in Montreal.

In taking action on this matter the Committee first considered various alternatives for accommodation put forth in the Reeks report on support facilities and accommodation for the ESC. The alternatives included: (1) the rental of office space, (2) shared facilities with other Societies in an office complex,

(3) purchase of a small residence as an ESC investment, (4) participation in the House of Science and Technology shonsored by SCITEC.

Alternatives (3) and (4) were ruled out, simply on the basis of the deadline set for the move from the K. W. Neatby building. The purchase of an ESC residence would be a major financial investment that could not be nogotiated within the time limit. Recent word from Dr. Bachynski (SCITEC) indiented that the thouse of Science was still very much in the survey and planning stages and there was little chance of a firm docision on the matter within the next year. The Committee's decision to concentrate on alternatives (1) and (2) was further supported by three factors: they provided for a shortterm lease arrangement that would provide a stop-gap until alternatives (3) and (4) were more carefully assessed; they were unanimously favoured by all Board members who offered comments and recommendations to the Finance Committee; accommodation problems were facing the Genetics Society of Canada and there appeared to be some hope of negotiating a shared rental arrangement.

A survey was made of avuilable office space within a reasonable distance of the K. W. Neatby Building. Area restrictions were necessary because the Society will depend on library and storage facilities provided by the Research Branch and we have had assurance that the Branch is prepared to continue these services. The survey revealed everal suitable possibilities for rental but the one offering the best facility in terms of cost, location, bus service, and appropriate space (475 sq. ft.) was at 1320, Carling Avenue. At this time the Committee was approached by officers of the Genetics Society of Canada to consider the question of shared accommodation. The 475 sq. ft. were considered adequate for the office staff of both societies and negotiations from here were with the understanding that facilities would be shared by the two societies.

In our treliminary negotiations with the rental agency it became apparent that in view of current demand for offic space the Society would have to take action on the signing of a lease before baving the general approval by the Board of Directors at the Montreal meeting. On the advice of the President the Committee was asked to contact members of the Executive and the Managing Council and with their approval proceed with the signing of a 2-year lease. The Committee has approval of the Executive and Managing Council and a lease has now been co-signed on behalf of the President of the Entemological Society of Canada, and the Genetics Society of Canada. Rental will be shared 30-50 and the monthly cost for ESC will be \$112.50.

Still to be resolved are the questions of office equipment and the physical move to the new quarters. The Committee has taken stock of present office equipment and preliminary estimates indicate that additional furniture custing between \$500 and \$1,000 will be required to establish our new office. The Cenetics Society of Canada has expressed interest in a coordinated move of the two offices to the new quarters but arrangements are not complete.

Recommendations:

The Finance Committee would like to have the Board's approval of the short-term rental arrangements for office space, authorization to proceed with expenditure of funds for additional office furnishings, and authority to proceed with arrangements for the physical move to new quarters at 1320 Carling Avenue to meet the deadline for moving from the K. W. Neatby Building.

REPORT OF THE PROGRAM COMMITTEE

A detailed report on the 21st annual meeting, Entomological Society of Canada and the 70th annual meeting of the Entomological Society of British Columbia, August 24-26, 1971, Victoria, B.C., was submitted for the midwinter 1972 meeting of the Coverning Board.

The General Chairman for the ceting was D. C. Finlayson, The General Program Chairman was Dt. R. Ring, President, E.S. of B.C. Serving with him were J. Chapman, A.F. Hedlin, C.E. Neilson and N.V. Tonks. Local arrangements were made by J. R. Carrow, R. F. Shepherd, E.D.A. Oyer and L. H. MeMullen.

Nine meetings of the Program Committee were held to plan and organize the meetings. The scrientific sessions were held at the University of Victoria, which also provided accommodations for most registrants. There were 122 members, 22 students and 30 others registered. The program included two symposia: "Advances in insect systematics and evolution. Chairman, C. C. E. Schider, and "Chemical attraction and insect control", Chairman, B. W. Stark. There were two invitation papers, "Understanding olfaction" by B. H. Wright, and "Electron microscopy with plant virus vectors", by A. R. Forbes, and 46 submitted papers in four concurrent sessions. The Cold Medallist's address was by Prof. J. G. Reinpel, "The University at the Crossroads".

Social events included a Ladies' Program, an informal reception, a luncheon honoring rerired mem ers, a mixer and hanquet and a salmon barbeque, logger's show and dance at Sooke. A post-conference tour of lower Vancouver Island was t ken by 24 persons.

The year 1971 was British Columbia's Centennial year and the committee received considerable assistance from the Provincial Government. The Department of Travel Industry provided two mailings to members of notices and material on British Columbia. The Department of Agriculture provided an excellent banquet for registrants and wives.

A photo salon was held, but received only a few submissions. These were exhibited during the meetings.

Publicity was arranged by T. Jones, Information Officer, Pacific Forest Research Centre, assisted by J. Chapman. There were two TV interviews and numerous interviews by local reporters resulting in many newspaper reports on the meetings and on current entomological problems in Canada.

Registration fee was \$20.00 (\$15.00 for students) for members. This included the luncheon for retired members and the salmon barbeque at Sooke. There was a \$3.00 registration fee for ladies. Financial contributions were received from 14 companies, totalling \$250.44. The University of Victoria contributed \$300.00. Total receipts were \$6,567.26 and total expenditures were \$5,621.00 leaving a surplus of \$945.00 from the meetings.

J. A. Chapman

CANADIAN ENTOMOLOGIST 100 YEARS AGO

THE CANADIAN ENTOMOLOGIST (1.00) and LE NATURLISTE CANADIEN (\$2.00) will be sent for one year for \$2.50 (gold) or \$2.75 (U.S.)

REPORT OF THE EMPLOYMENT COMMITTEE

During the past year the omunittee has continued to receive and process applications from entomologists seeking employment. In some cases, arrangements were made for direct contact between prospective employers and candidates for employment. More than 30 classified ads for positions wanted, and 7 for positions available, were published in the Bulletin during 1971-72. Space was made available at the annual meeting in Victoria last year where curricula vitae were available for prospective employers and where personal interviews could be held. This service is expected to continue as long as there is a need for it.

In the first animal report we stated our intention to investigate me extent of recruitment of entomologists by government departments, universities and industry, the numbers of students in post graduate programs in entomology at Canadian universities, and the prospects of comployment. We surveyed the agricultural chemicals industry and universities to seek information about present and future requirements for people with entomological backgrounds or training.

Of 20 major companies only two indicated they had positions available in 1972. Employment opportunities in industry are limited and this rigid manpower control is likely to continue for the next few years. Some companies indicate that circumstances could alter the situation at any time.

Of 47 Canadian universities and colleges surveyed, 20 completed our questionnaire. There were 100 students at the graduate level in 1967 and 141 in 1972. Only one of the 29 schools that replied indicated that it would hire a new staff member in entomology in 1972. Within 3 to 5 years 13 new staff members with training in entomology will be hired. Nearly every school plans to maintain its present corollment, or to increase the number of students at the undergraduate and graduate levels.

In government the situation is not much better. Budgetary restrictions have forced cancellation of some research projects. Recruiting is at a very low level. The government which used to be the major employer of entomologists is no longer absorbing the bulk of Ph.D. research workers in Ento clogy.

We shall soon be producing twice as many Ph.D.'s as there are jobs available for them in government, industry and universities.

A more complete and detailed report on the study made by the employment committee has been submitted to the Society for its consideration,

S. R. Luschiavo

CANADIAN ENTOMOLOGIST 100 YEARS AGO

DETERMINATION OF Sex — In view of the occasionally great dissimilarity in the sexes (as now received) of several species of Lepidoptera, it would be interesting to know how many of these have been determined from the fact of copulation, seeing that evidence of this nature, although presumptively good, cannot be considered as complete proof that the sexes so seen in coitu are sexes of the same species. — Samuel H. Scudder (4:78)

REPORT OF THE COMMITTEE ON STUDENT ENCOURAGEMENT

The Committ on Student Encouragement was re-formed following the 1971 Annual Meeting. It is appropriate that the first annual report of the new committee should acknowledge the contribution of previous committees in identifying the need for Soc ety participation in student encouragement.

Major emphasis during the past year has concentrated on the identification of objectives and consideration of pussible methods of implementation. This process is necossarily slow, but the following actions were taken under the auspices of this committe:

- L Liaison has been maintained with the Teen International Entomological Group (TIEC), and a grant of \$100 anthorised to support the activities of the group. A further donation of \$50 assisted in sending a TIEG exhibit to the 14th International Googress of Entomology in Australia.
- 2. Arrangements have been made with the Royal Ontario Museum to display a TIEG exhibit in spring and early summer of 1973, and to have TIEG literatur available for distribution to visiting students.
- 3. A presentation entitled 'Use of Insects in the Classroom' was given in a meeting of Ontario Department of Ed cation Science Consultants.
- 4. The Entomological Society of Alberta continued to sponsor an insect collection competition for pre-university students and to supply collecting nets and display cases to interested amateur entomologists. The E. S. Alberta also award two annual scholarships 10 university students of entomology.
- 5. The committee was represented at the symposium 'Entomology and Education' held at the University of Alberta in May 1972.
- 6. Response to a notice placed in the Bulletin (3(4):82) was poor, and plans for a Society produced manual of entomology are presently under reconsideration.

Hoger G. H. Downer

CANADIAN ENTOMOLOGIST 100 YEARS AGO

The Annual Meeting of the London Branch was held on Friday evening, January 5th, at the residence of Mr. W. Saunders. In addition to a goodly attendance of London members, we were favoured with the presence of the esteemed President of the Parent Society, Rev. C. J. S. Bethune, M.A. The following officers were elected for 1872:—

III Onton	Mr. E. B. Reed
President	Mr. J. M. Denton
Vice-President	Mr. W. Saunders
Sec,-Treasurer	Mr. Joseph Williams
	arought into use, and added

Mr. Puddicombe's excellent microscope was brought into use, and added much to the interest of the meeting. (4:57,77)

COMMITTEE ON PUBLICIZING ENTOMOLOGY

Dr. McKinlay was appointed chairman of a new committee to investigate this subject for the Society.

It would be argued that one of the main functions of the Society is to facilitate the distribution of information about insects. The Canadian Entomologist and our annual meetings serve this purpose tolerably well at the specialist level, flowever, it may not be enough for entomologists to talk only to each other. It might be advantageous for them to communicate with the public. Pure self interest suggests that since most of our salaries come, one way or another, from the public purse it could do no harm for the public to see that they get something of value for their money! More altruistically, only an informed public can make proper use of the information we obtain and make informed judgements. After "Silent Spring" it is hardly necessary to labour this point,

However, whilst more popular entomology may be a good idea in principle there are considerable difficulties which would have to be overcome in practice. Publishing costs and a dearth of writers in a popular style who could wean the citizen from his TV set would be two major obstacles.

Theoretically a number of possibilities exist which range all the way from a profusely illustrated, popular style Entomology Annual each year to simply encouraging our members to write for the local paper occasionally. A more practical approach is to expand the Bulletin and include articles of this type since it is now circulated to the Science Writers Association of Canada.

Since this seems to be a worthwhile but controversial project I feel that it should be examined in some detail by the Governing Board before any action is taken.

K. S. McKinlay

REPORT OF THE CIFT SUBSCRIPTION COMMITTEE

Since our last report in January 1972 two subscriptions have been donated for the use of the program and one gift subscription has been made to a library in Iran. Interest in the gift program thus appears to he waning. Therefore, we would remind all members of the Society of our dependence on you for information of potential recipients of gift subscriptions to The Canadian Entomologist. We have several su scriptions on hand walting for suitable homes.

May we also take this opportunity to thank all those who to this date have generously donated their Canadian Entomologist subscritpions or have forwarded names of the worthy recipients of some of these gift subscriptions.

H. J. Teskey

REPORT OF THE MEMBERSHIP COMMITTEE

The Committee consists of L. Roadhouse, Ottawa (Chairman), S. Loschiavo, Winnipeg, Manitoba, P. E. Blakeley, Lethbridge, Alberta and R. Stark. Moscow, Idaho.

The Committee continued its campaign for new members by means personal contact with hotential members as the opportunity arose. Membersh for the past several years has remained stationary, being on the average arour 700 full members and approximately 125 student members.

An Emeritus Membership class, requiring a change in the By-laws we proposed to the membership for consideration: Article IV, Section 1(a)

(4) Emeritus Member: Any active member in good standing who ha retired from active service may, on the request and approval of the Board continuo as an emeritus member without payment of dues.

Arttele IV, Section 2

Emeritus members may attend and take part in discussions at meetings but shall not vote or hold office in the Society.

The new subsections on emeritus members were proposed as a means whereby retired members who no longer wish to receive the Canadian Entomologist but desire to keep in touch with the Society can do so.

Four sustaining members have continued their membership in the Society,

L. Roadhouse

REPORT OF THE COMMITTEE ON COMMON NAMES OF INSECTS

The Committee did not receive any submissions during 1972. Our only activity was to redesign a new form for the submittal of common names.*

Early in the year 1 w s appointed Chairman of the Committee on Common Names, Entomological Society of America. By way of information, this committee was quite active, and we dealt with nearly 50 proposals and other matters.

Since I retire from the Public Service next April, it would be advisable to appoint somehody else as chairman of the E.S.C. Common Names of Insects Committee. My thought is that the new chairman might be appointed as a member of the E.S.A. committee. Three vacancies will need to be filled on the E.S.A. committee in 1973. I have written Dr. Murdoch, Executive Secretary, E.S.A., that the incoming chairman of the E.S.C. committee should be considered for one of the vacancies. Of course, I have no idea whether my suggestion will be acceptable to the Coverning Board of the E.S.A.

Recommendation:

That Cleun B. Wiggins, who has been a valued member of the E.S.C. committee, be asked to chair the Committee on Common Names of Insects.

Han B. Wressell

Proposat forms are available from the committee on request

TREASURER'S REPORT

Privileges of Emeritus Members.

One of the main reasons for establishing this class of membership was to maintain contact with retired numbers who no longer felt they could continue their membership in the Society. To my knowledge, no decision was made regarding the privileges of Emeritus Members.

I suggest the following guidelines for your consideration:

Emeritus Members will:

- (1) receive the Bulletin free (value about \$1.50 per year per Emeritus Member).
- (2) be asked annually (probably in October) if they wish to receive the Bulletin the following year.
- (3) be encouraged to contribute articles for the Bulletin, and the Canadian Entomologist.
- (4) receive notice(s) of Annual Meetings.

Emeritus Members will not:

- (1) vote or hold office (in By-Laws).
- (2) receive the Canadian Entomologist and Memoirs.

When guidelines are agreed upon, I suggest that a notice concerning Emeritus Members be placed in the Bulletin. This will inform those retires who are still regular members of the Society Furthermore, I suggest that we contact those retired members who have resigned recently from the Society and give them an opportunity to become Emeritus Members.

The Interim Financial Statement to 31 October 1972 shows cash-on-hand at \$58,239,80, total assets of \$162,791.51, liabilities of \$24,468,00 and an estimated excess of assets over liabilities of \$118,323.51. Receipts for the same period were \$154,437.40 and disbursements were \$98,197.60.

Circulation of the Canadian Entomologist was:

	Oct. 1972	Dec. 1972	Dec. 1962
Members	782	791	670
Student members	132	113	30
Subscribers	911	884	508
Exchanges	31	36	95
	1,862	1824	1303

The proposed budget for 1973 anticipates receipts of \$117,040.00, disbursements of \$103,837.00, or an excess of receipts over disbursements of \$13,203.00

The audited financial statement for 1971 was published in the Bulletin 4(3):48-49.

Edward C. Becker

REPORT OF THE ACMEVEMENT AWARD COMMITTEE

In addition to finding a worthy recipient for the Society's highest honour, the Committee presented detailed proposals on how the terms of reference might be improved. The proposed new terms of reference differ from the old terms of reference principally in that the conditions governing the award, the procedures for guarding confidence, and the nomination procedures are tightened. It is recommended that recipients need not be members of the Society, that the Selection Committee be increased to three, and that the Committee's choice of recipient require the endorsement of the Governing Board. Because of the length and detail involved, and the possibility of its not being adopted in it entirety, the complete list of recommendations is not presented here.

Ed.

REPORT OF THE REPRESENTATIVE, CANADIAN STANDARDS ASSOCIATION COMMITTEE ON COMMON NAMES FOR PEST CONTROL CHEMICALS

A meeting of the Canadian Standards Association (CSA) Committee on Common Names for Pest Control Chemicals was held on December 7, 1971. The members approved approximately 90 additional common names for pest control chemicals and these names will be adopted by the Canadian Standards Association and included in a revision of Standard Z-143, entitled "Common Names for Pest Control Chemicals." Of the 90 pest control chemicals considered, approximately 50 portray insecticidal or acaricidal properties or both. A new CSA Standard will be published later this year in which all common names approved to date (approximately 425) will be included.

L. Roadbouse

CANADIAN ENTOMOLOCIST 100 YEARS AGO

DORYPHORA 10-LINEATA, the champion potato-eater, has made his way east as far as this city. I saw several crawling about in September. — R. V. Rogers. (4:200)

MINIATURES OF THE SIMELD OF THE ENTOMOLOGICAL SOCIETY OF CANADA

These wall shields mounted on oak are hand-painted. A half-red, half-gold maple leaf rests on a pale-blue field; on the sample leaf rests a Grylloblatta, half silver and half black. Surrounding the central design is a band of silver enscribed SOCIETAS ENTOMOLOCICA CANADENSIS. Members of the Entomological Society of Canada, who would like to purchase one of these attractive shields, should contact the Secretary, Dr. D. M. Davies, Department of Biology, McMaster University, Itamilton 16, Ontario.

REPORT OF THE COMMITTEE ON INSECT COLONIES

A list of "Laboratory Colonies of Mites, Ticks and Insects in Canada" is published by the Society every two years. The last appeared as a supplement to the Bulletin in June 1971; the next is scheduled for 1973.

Preparations are being made to contact cooperators on the last issue about changes. A antice asking for information on other laboratory colonies has been inserted in the Bulletin.

J. S. Kellcher

REPORT OF THE ELECTION COMMITTEE

See Bulletin 4(3):50.

REPORT OF THE LIBRARY COMMITTEE ON EXCHANGES OF THE CANADIAN ENTOMOLOGIST

There is no change from last year. For further information please refer to reports of 1970 (Bulletin 2:86) and 1971 (Bulletin 3:55).

J. F. McAlpine

CANADIAN ENTOMOLOGIST 100 YEARS ACO

Finding my corrant and gooseberry-bushes infested with caterpillars, I watered them with hellebore and alum — I oz. powdered helichore and 2 oz. powdered alum, to a gallon of water — which I find an unfailing remedy. — V Clement: (4:37)

LABORATORY COLONIES OF MITES TICKS AND INSECTS IN CANADA

A list of colonies of insects and related arthropods maintained in Canadian laboratories was published as an insert in the Bulletin in June, 1971. This will be revised and published again in 1973.

Cooperators in the last list will be contacted directly but if readers know of any laboratory colonies which might not otherwise be included please contact J. S. Kelleher. Scientific Information Section. K. W. Neatby Building, Ottowa, Ontario KIA 008.

From the Journals

EFFECTIVE MOSQUITO CONTROL WITH MINIMAL INSECTICIDE USE

Everyone appreciates the need for reduced insecticide use, and results of a study over several years in the Winnipeg area olfers several hints to those planning mosquito control programs with this in mind (Can. Ent. 104: 981-968). For example, only 3% of the uncultivated land area was shown to be involved in mosquito production. This meant that 97% of the land, which would receive toxic insecticides using normal aerial applications, would not need to be treated. This, a modern mosquito control program uses less insecticide. Furthermore, modern insecticides are shurter-lived. These insecticides are applied by ground crews to only those breeding pools which are found to be heavily infested. Pools which produce the largest number of mosquitoes are usually small and tem orary, remaining for 2 to 3 weeks following a general rain of 2 inches or more. After a summer rain, surveying and spraying pools is limited to 5-7 days before a new brood of mosquitoes emerges.

Several factors assist the ground crews in locating infested pools. For example, the same pools usually produce more than one mosquito crop during a single season. Also, very few infested pools are found more than an half a mile from the adult food source, the blood of animals such as beef and dairy cattle, swine or horses, and often are located within a few hundred yards of reedlots halfer words, populations are most efficiently controlled during the larval stage when they are confined to small areas which require minimal use of short-lived insecticides.

From the Journals

BEES, WASPS AND ENVIRONMENTAL DIVERSITY

Plant succession following disturbance by logging or by outbreaks of the spruce budworm, Choristoneura fumiferana (Clem.) is the underlying lactor determining wild bee and wasp populations. So indicate studies in localized areas of forest in the Black Sturgeon Lake area of northwestern Ontario (Can. Ent. 104/1623-1633). The early pioneer plant species are highly attractive to bees and harbor large numbers of prey of the wasps. The close association of several of the bee species with introduced forage legumes suggests that some wild bees may be potentially manipulable species for pollination. As the forest matures and light penetration decreases, the quantity and diversity of bloom and prey declines. The decline is accompanied by a decrease in the populations of bees and wasps. The wasp and bee populations may be representative of the dynamics of other insect populations as the lorest approaches the limited species composition of mature forest. Therefore the mature forest arallels the limited cro array of agriculture which is commonly attended by minimal ecological complexity and a paucity of potential parasites and products for the suppression of potential outbreaks of destructive species.

BIOLOGICAL CONTROL OF GRASSHOPPERS

Ος τη βρύχ προλιτών, και έλος και όμήθεοι λιμιών, αγρώασων λειμώοι μολουρίδας, ή βατραχίδας. ΝΙΚΑΝΔΡΟΣ.

Nikandros of Kolophon (Mid 2nd Century B.C.)

This sage advice, given by an erudite early Greek is over 2100 years old (the word molouris for an acridid is uncommon, probably foreign). Some 1700 years after it was first made, the recommendation became available to the masses through the printed page, being translated into late Latin (known, of course, to everyone!) by, I believe, a gentleman by the name of Grevinus (along with the Greek text edited by one, Gorraeus), in Paris, 1557 A.D., more or less as follows:

Hic linqueus museos, stagnantes atque paludes, Dum ranas sequitur, vastans per prata locustas.

I also believe that one or two readers may be unfamiliar with this gem of applied entomology (even although it was picked up in the first textbook of entomology to be published, Ulysse Aldrovandi's De Animalibus (asectis . . . of 1602 — and subsequently dropped!), and that they might more readily comprehend a slightly updated rendering:

Thus, by leaving mosses, and pands and likewise bogs,

Locusts in the mendow'd be fed on by following frogs!

I may add that I cannot vouch for the soundness of Dr. Nicander's proposition. He was a physician who wrote at length in verse about (among other things) hunting and farming, seemingly (like many a modern author) without any experience of either. "There is no new thing under the sun" (as it says in the Koheloth or Ecclesiastes, I, 8, which was apparently written about a century before Nicander!). However, since, if his advice was followed, mosquitos (as well as frogs) would undoubtedly have been encouraged, and the resultant increase in the incidence of ague among the local populace would surely have been excellent for the good doctor's business!

D. K. McE. Kevan

CANADIAN ENTOMOLOGIST 100 YEARS AGO

Stephen's generic descriptions are so general and vague, that one who has to rely upon them, without having seen authentic specimens, is driven to the necessity, in a good degree, of guessing at the genus to which a new species may belong. — V. T. Chambers (4:43)

BOOK REVIEW

Dynamics of Population. The Advanced Study Institute, Oosterbeck, The Netherlands, Sept. 1970. P. J. den Boer and G. R. Gradwell Eds, Centre for for Agricultural Publishing and Documentations, Wageningen, The Netherlands, 1971, 611 pp., illus. Dfl 65.

This is a hefty symposium volume with its 611 pages. Of its 41 papers about half are rusearch reports that would have been more at home in regular scientific journals. The other papers, those that review, discuss, synthesize and generalize, in the way symposium contributions should are a very mixed bunch. They range from pretentions, hadly-written reruns of old debates at one extreme, to papers that are truly original and thought-provoking at the other.

llere it is possible to mention only a few of the good papers. I. Reddinguis gives an interesting discussion of the theory and practice of ecological model building. J. C. Coulson, describes the population consequences of colonial breeding in seals and sea birds. J. L. Harper and J. White compare the dynamics of annual and perennial plant populations C. T. de Wit discusses the modelling of competition in plants. T. Royana explores the factors determining the success of predators and parasites. L. C. Birch writes of the way in which environmental and genetic heterogeneity can save a species from extinction-M. J. Way and M. E. Cammell describe self-regulation mechanisms in animals (aphids) that live in an unstable environment-

This list, which mentions only a subset of the papers that interested me, gives some idea of the wide range of topics covered. In the penultimate paper K. E. F. Watt, after deploring the present fragmented state of ecology and its lack of a strong theoretical core, of ers a way of arriving at a "satisfactory theoretical basis" for the subject. It is paper should interest all readers of the Volume and will surely stir up controversy. For myself, I can only give the opinion that whether or not generality is desirable it certainly will not be attained by drawing up what amounts to a creed that ecologists are expected to subscribe to.

The volume is well produced. It has separate subject and species indices but, unfortunately, no author index. The printing of mathematical symbols in ruman instead of italic type is a constant annoyance; often a sentence that appears hopelessly garbled comes clear belatedly when one realizes that "a" is is a symbol and not, as one had assumed, a word.

E. C. Pielou Department of Biology Dalhousie University Halifax, Nova Scotia

LIBERATION BULLETIN = PARASITES AND PREDATORS

A compilation of insect parasites and predator releases in Canada is published annually by Canada Agriculture. Field workers who, in 1972, made such releases which were not provided by the Importation Service are asked to contact I. S. Kelleher, Scientific Information Section, K. W. Neatby Building, Ottawa, Ontario, KIA OCS.

BOOK REVIEWS

Pesticides: the issues, the alternatives. Agricultural Publications, University of California, Berkeley, February 1972. Obtainable free of charge from: Public Science Room 90, University Hall, University of California, Berkeley, 94720.

Here is an attractive, well prebared, 22-page, pocket-size publication "intended for all those who share with scientists of the University of California a sense of concern for the natural resources and environment, . . " This is basically for John Public but does not lack scientific rigour. It covers the henefits of, and needs for, pesticides, the problems of resistance, resurgences, secondary outhreaks and effects on the environment. Alternatives are also discussed, as well as public understanding and support

Annual Review of Entemology. Vol. 17, 1972.

Annual Reviews, Inc. Palo Alto, California. \$10.00

This is the seventeenth volume of this excellent series. This articular volume contains 22 reviews dealing with such varied aspects of entomology as bio-geography, insect memory, sex determination, vectors of disease, pests of sugar care, insecticides as carcinogens, pollination, economics of control, comarative morphology pigments and color change, plant quarantine regulations, mathematical analysis of ollution, and other subjects, not forgetting a most interesting biography of the Victorian entomologist, Hermann Butmeister.

Judging by the articles that deal with the subjects that I am familiar with, the reviews are of the highest quality. This volume in fact, maintains the praiseworthy standards of its predecessors. No serious entomologist — much less any entomological library — can afford to be without the whole series of these reviews. They are invaluable to both the teacher and research worker. The brooks are a bargain at the modest price.

D. P. Piclou

CANADIAN ENTOMOLOGIST 100 YEARS ACO

Female Decoys — Last summer an enthusiastic lepidopterist in Kingston put a young female Cecropia moth (Platysamia Cecropia) in a box, with wire gauze on one side, and placed it on his verandah — which, by the way, is at a considerable distance from any trees. Although my friend did not watch very long, yet, the first night he caught five males, attracted thither in some unknown and mysterious way, by their fair relative; the second night, ten males were captured, and on the third, eight more were taken; while, in the morning, the scattered remains of five other amorous moths, (slain doubtless by the cats), were found lying near the cage. Several specimens of Telea Polyphemus were taken in the same manner. Is not this decidedly the easiest and most successful way of collecting a good harvest of these gorgeous creatures? — R. V. Rogers (4:138-139)

REVIEW

Lifelines: Some Policies for Basic Biology in Canada, Report No. 17 of The Science Council of Canada.

The report is concerned with the work of more than 1000 Canadian Scientists engaged in research on basic biology who do not work directly within the context of specific practical missions e.g., production of goods, pollution control, health care, etc. Somewhat more than half do their research in association with university teaching, the others are full-time researchers although not necessarily in full-time basic research.

The Council is concerned with this group for two reasons, First because they provide a reserve pool of talent which can be drawn into mission-oriented activities as the need arises. Second, because the Council estimates that the need for more applied knowledge in the life sciences in the future will grow faster than the corresponding requirements in the physical sciences, thus increasing the demand for basic knowledge in biology. This is a world-wide trend and reflects the greater degree of human ignorance in life sciences. In addition, the proportion of basic knowledge that is of vital interest to Canada but is not likely to be developed abroad, is much higher in biology than in other subjects, like physics, which are not so dependent on climate or environment. For this reason, the report advocates placing a greater accent on studies which, while basic in nature, are concerned with the biological phenomena that have a specific relevance to life on, in and around Canadian land, even if the practical significance of the knowledge thus gained cannot yet be predicted. It is also stressed that in the life sciences the division between basic and applied research is even more nebulous and artificial than in the physical sciences.

With due reservation because of these difficulties in classification, the Council estimated that Canadians spend about one to two dollars per capita annually on the acquisition of basic knowledge about living organisms and life processes, with about 50 cents of that supporting the work of the "administrative-ly uncommitted" group in question. This is deemed lower than it should be on the basis of Canada's area, biological diversity and developed resources. Qualitatively, our research effort is judged to be respectable by world standards, with some excellence and little unsatisfactory effort. Our relative strengths and weaknesses are reviewed, noting samll contributions to the spectacular global progress in molecular biology but a good showing at the complex level of ecology. A tendency is noted to follow an orthodox approach, avoiding bigger risks which could bring bigger rewards, and to keep the level of involvement low in inter-disciplinary work.

The Council expects major global developments in ecology, neurobiology and immunology in which Canada should participate. There is a growing need to complete inventories of Canadian species, particularly invertebrate animals, plants and microbes, parallel with sophisticated studies of our ecosystems.

The recommendations are commendably explicit. The vast majority of them (as well as the bulk of the detailed discussion) refer to the role of NRC.

Some of the conclusions and recommendations are: NRC should continue to be the major source of support for research and research training in basic biology in university faculties of science. The NRC Advisory Committee on Biology should be especially concerned with the direction, scale and management of the intramural and extramural research programmes of NRC in the life sciences on a continuing basis; and that there should also be a quinquennial review, at a higher level, of all federal activities in the life sciences. NRC

with the assistance of its Advisory Committee on Biology should give serious consideration to the hest means of developing its granting policies. The National Research Council, with the aid of is Advisory Committee on Biology, should determitte the areas of biological research that deserve special attention because of their relevance to Canadian needs, and when necessary, encourage the growth of research in these fields through preferential granting and training policies. NRC should continue, and if possible strengthen, its support of Canadian biological journals. Mission-oriented federal departments should limit their own basic biological research to what is needed for effective prosecution of their applied research. Direct external support of basic research by missionoriented federal departments should he limited to research that is clearly relevant to immediate Canadian needs. There should be close cooperation between federal and provincial authorities in the promotion of wildlife and ecological research. University biologists and biology departments should be ready to consider remoulding their research and training programmes in ways that would permit increased flexibility and ability to cross disciplinary boundaries. University biologists should be as fully acquainted as possible with the ptoblems of biological research and technology in government and industry The funds devoted by NRC to the support of biological research should increase for three years at an annual rate of only 5 to 10 percent, to match the effects of inflation and of a possible further increase of university enrolment in the life sciences. The Canadian biological community, through its societies and in collaboration with NRC and other agencies, should begin immediately to participate in identifying Canadian accels and priorities in the area of bioscience iesearch.

It is apparent when reading the report that it is a "concensus" type docurrent, with no place for radical recommendations, and with too much repetition. Also, the degree of space devoted to reviewing the relevant NRC activities makes it read, in places, like an NRC annual report. Nevertheless, the report may be recommended as easy and useful reading for those who are interested in the future of research in Canada.

Contributed by S.C.C.

REVIEW

Policy objectives for basic research, Report No. 18 of the Science Council of Canada.

This report concludes with the following diplomatic statement:

... we (The Science Council) wish to reiterate that our support of the principle of greater orientation of basic research towards the areas of special interest to Canada includes a clear understanding that a significant proportion of that research must continue to be conducted free from any influences external to the inner logic of the science itself.

This careful wording appears innocuous enough until it is realized that the Science Council is in fact politely telling the Basic Research community which has long been marinating in "laissez-faire" that the Basic Research System must be nudged — gently of course — towards areas of research of particular importance to Canada. The extent of the push, that is the extent of the trade-off between "free" and "oriented" basic research, would depend on the judicious application of twosets of criteria in assessing the merit of research proposals and selecting times of general emphasis. One set of criteria is internal to the science per se (e.g. "beer" evaluation) while the other is esternal to it and dependent conspecial Canadian requirements. If the criteria given in the report are applied with some degree of objectivity, the Science Council believes that Canada then has a much better chance of attaining the three policy objectives which have been set down:

- developing Canadian experts who are members of the international community of scientists. Through them Canada can benefit from, by contributing to, the world pool of knowledge;
- making special contributions to the generation of basic knowledge in the fields in which our farticular interests cannot be met to a sufficient degree by the rate of progress elsewhere;
- 3. maintaining the quality of higher education and exerting positive influence on R & D activities in general.

As reasonable as those objectives may seem, their attainment will be influenced by the evolution of scientific affairs in general, which is difficult to predict at the present time.

When we add to the uncertainty in scientific affairs our own national problems, particularly those relating to federal-provincial relations, and the lack of clearly defined national objectives, we can quickly appreciate the difficulties of trying to apply objective criteria to decision-making re basic research particularly since there is no coherent planning framework within which to operate. In the final analysis, the decisions taken regarding the support of basic research will be human decisions which will depend more on the "state-of-play" than on explicit criteria. They will be decisions which reflect all the vagaries and paradoxes of human aspirations and apprehensions. Dr. R. Gaudry, the Chairman of this study, noted in his foreword to the report:

. . . they (the "peer" committees) tend to have very definite opinions on the value of research proposals submitted to them. They are, of course, likely to be conservative and to place considerable weight on experience. Their recommendations are generally final. I have doubts about the suitability of these committees to pass judgment on novel and unorthodox purposes. Unfortunately a better system of evaluation has not yet been developed.

A better system of evaluation for basic research would necessitate better overall planning — planning which can couple science policy to public policy. The criteria given in the report cannot be applied in isolation. The Science Council does ask us, ". . . to foresee future practical problems some ten to twenty years ahead and to deduce the nature of basic knowledge that will be needed as a foundation for solving future problems." Forecastiing problems is fine but such exercises represent only part of the picture. To complete the picture we must develop a planning framework in which such forecasts can be integrated into an agreed-upon plan permitting us to act in order to avoid potential problems before they are actually upon us. In other words we must take our future into our own hands rather than simply reacting to change. Much fundamental research of an anticipatory nature will be needed to help define the problems and policy options more clearly. Therefore attempts at better planning should not be decried as the death of "laissez-faire" but applied as the enlightenment of "muddling-through".

Contributed by S. C. C.

OFFICERS ENTOMOLOGICAL SOCIETY OF SASKATCHEWAN 1972-73

President:

Dr. R. H. Burrage

Secretary-Treasurer: P. G. Kroeger

Vice-President:

Dr. R. Pickford

E.S.C.

Regional Director: K. S. McKiolay

All are at the Canada Department of Agriculture, Research Station, University Campus, Saskatoon, Saskatchewan.

OFFICERS ENTOMOLOGICAL SOCIETY OF ALBERTA 1972-73

(effective January 1)

President:

Dr. Kay Ball

Directors:

Mr. L. K. Peterson

Vice-President:

Dr. B. Heming

Mr. W. B. Porter

Sec.-Treas.:

Dr. A. M. Harpe

Dr. W. A. Charnetski

Editor:

E.S.C.

Dr. H. R. Wong

Regional Director. Dr. W. O. Haufe

Address of the Secretary-Treasurer:

Agriculture Canada Research Station Lethbridge, Alberta, TIJ 4B1.

OFFICERS ENTOMOLOGICAL SOCIETY OF MANITOBA 1972.73

President:

V. Hildeh)

Treasurer:

G. L. Ayre

President-Elect:

R. N. Sinha

Secretary:

John E. Guthrie

Past-President:

D. L. Smith

Atomic Energy of Canada Ltd., Pinawa, Man., ROE 1L0

Editor Mani'toba Entomologist: W. J. Turnock C.D.A. 25 Dafoe Rd., Winnipeg

Regional Director to E.S.C. (1972-74)

R3T 2M9

V. Hildahl

EMPLOYMENT

The Entomological Society of Canada will maintain a list of employment opportunities in Canada for members, and establish an employment office at annual meetings of the Society where prospective employers and employees may contact one another and conduct interviews. Up-to-date listings of positions available and positions wanted will be published in this and future issues of the Bulletin. Listings will appear in one issue only unless otherwise requested. Blank forms designed for use by prospective employers and candidates for employment are available on request. The employment committee will not publish names unless expressly requested by individuals concerned. All resumes received will be accessible to interested persons at the placement office at annual meetings unless otherwise instructed by applicants.

The employment committee cannot provide a personalized service to society members requesting information about job openings. All information is prepared in classified ad form and printed in the **Bulletin** or is available at annual meetings of the Society. Requests by prospective employers for curriculum vitae are handled by the committee. Those sending curriculum vitae to the committee are requested to indicate their membership in the Society.

POSITIONS WANTED

Ph.D. in Zoology/Parasitology and post-doctoral training in medical entomology and medical protozoology interested in research on arthropod-transmitted diseases and parasites; qualified to teach general and medical protozoology and parasitology, general, medical, forest and agricultural entomology and insect morphology and ecology. Ref. No. 44-34-72.

Ph.D. desices position in research teaching and/or extension work. Experience in heliavior and ecology of honey bees. Ref. No. 37-37-72.

Ph.D. seeks research position, with or without teaching, in aquatic biology specializing in freshwater benthos ecology and taxonomy. Ref. No 36-35-72.

Ph.D. in insect ecology seeks teaching and/or research position. Major interest in ecology and physiology of haematophagous Diptera. Post-doctoral experience in purification of proteinases. Ref. No. 42-36-72.

Ph.D. in biology interested at aquatic ecology or aquatic entomology seek te ching/research position in this field. Ref. No. 45-38-72.

Teaching or research position desired by Ph.D. with major interest in physio logy-toxicology. Ref. No. 43-39-72.

Doctoral candidate interested in population biology of furest insects desires research or teaching position. Ref. No. 46-40-72.

Recent Ph.D. graduate with interest in taxonomy of mature and inmature in sects and in toxicology wishes teaching/research position in any area of entomology. Ref. No. 40-41-72.

M.S. candidate seeks position in pest management research: major interest in bark beetles and wood borers. Ref. No. 47-42-72.

Ph.D. candidate with interest in pheromones as control agents wishes to work in pest control or surveys. Ref. No. 44-43-72.

POSITIONS AVAILABLE

Maritimes Forest Research Centre, Department of the Environment, Fredericton N. B. seeks a doctorate graduate, male or female, with training and research experience in behavioral insect physiology, particularly of the spruce budworm. Salary to \$15,364.00. Quote reference no. 73-100-03 and submit before February I, 1973 to Bio-physical sciences program, Public Service Commission of Canada, Ottawa, Ontario. K1A 0M7.

Please direct all inquiries and correspondence to:

S. R. Loschiavo, Chairman, Employment Committee, Entomological Society of Canada, c/o Research Station, 25 Dafoe Rd., Winnipeg, Manitoba. R3T 2M9

DO NOT direct inquiries to the Bulletin.

Dr. Loschiavo regrets that many persons seeking positions at the employment office at Montreal cannot be served because the service is restricted to E.S.C. members. He has asked the **Bulletin** to express his regrets instead of writing them all.

PERSONALIA

B. V. Peterson of the Entomology Research Institute, Ottawa, is at the Museu de Zoologia do Universidade de Sao Paulo until April. He is participating in a scientific exchange programme sponsored by N.R.C. and will be working on several families of Diptera.

In addition to those listed in the last issue of the Bulletin, in order to find out what went on down there, consult Frank McAlpine, Peter Harris, Ed Bond, Jean-Jacques Cartier, P. C. Nigam, Brian Hocking, M. J. P. Mackauer.

Dick Vockeroth of the C.D.A. Entomology Research Institute is spending a year at the Vancouver Research Station on a work transfer. He is working on the biosystematics of aphidophagous symbols. His project emphasizes rearing, host range and preferences, and effect of temperature on color pattern.

PERSONALIA

Kieth Davies, and Marshall Laird who also attended the 14th International Congress of Entomology at Canbeira.

Kailash Sanwal has left Charlottetown to accept an appointment as Head Quarantine Unit, Division of Nematology, India Agricultural Research Institute New Delhi, India. Kailash joined the Entomology Research Institute in 1957 and spent the last two years at Charlottetown working on nematode problems of the Maritimes.

J. J. Cartier Program Coordinator, C.D.A., went to New Zealand and Australia in August to discuss entomological problems related to the international shipment of fruit.

Antony Downes, C.D.A. Entomology Research Institute, participated in a meeting of specialists on biting midges in Canberra and also attended a special meeting of the Entomological Society of New Zealand at Christchurch in early September.

Judith Myers was recently appointed Assistant Professor in the Department of Plant Science and the Institute of Animal Resource Ecology, University of British Columbia. She will be teaching economic entomology and biological control, and will carry out research in associated fields.

W. C. Wellington, Professor, Debattment of Plant Science and Institute of Animal Resource Ecology, University of British Columbia, was invited to participate in October 1972 in the work of the Insect Ecology Study Group at North Carolina State University, Raleigh, N.C.

Marcel Hudon, C.D.A., St. Jean. P.Q., participated in the 4th annual work planning conference of the International Working Group on the European Com Borer in Martonvasar, Hungary, in September.

W. J. Turnock, has been appointed head of a new Integrated Pest Control Section at the C.D.A. Research Station, Winnipeg, Previously, Bill had been a Science Advisor in the Ministry of State for Science and Technology with his headquarters in Ottawa.

Mr. Joseph D. Shorthouse was the 1972 recipient of the Arthur R. Brooks Memorial Prize presented by the Entomological Society of Saskatchewan. Mr. Shorthouse is a graduate student in entomology at the University of Saskatchewan, Saskatom.