Entomological Society of Canada
Société Entomologique du Canada

Bulletin

Vol. 11, No. 3, September — septembre, 1979

B.J.R. Philogène — Bulletin Editor

Cover Design: M.A. Sydor

Published by the
Entomological Society of Canada
1320 Carling Avenue, Ottawa

Entomological Society of Canada
Bulletin
Société Entomologique du Canada

Vol. 11, No. 4 December — décembre 1979

EDITORIAL

After years of undernourishment, if not starvation, the Canadian scientific community is finally going to be given a booster shot to prevent further malnutrition. The recently announced increase of 32% for NSERC funding by the Hon. H. Grafftey is the best piece of news we have had out of Ottawa for long. My only hope now is that this effort will be maintained so that Canada may regain the scientific reputation and respect its scientific community deserves.

Also out of Ottawa is an announcement concerning a proposed national agriculture research council. John Wise, the present agriculture minister said he endorses the scheme and would try to get it an annual budget of $25 million. Only $1 million is presently alloted to university-based agriculture research by Agriculture Canada, with average operating grants of $6,000. Agriculture is a $4.5 billion-a-year industry and it is hard to justify such meagre grants. This should be welcome news for entomologists.

———— || ————

This will be the last issue of the *Bulletin* in its present format. In 1980 members will receive a *newsletter* and a once-a-year *Bulletin* (see actions of the governing board, p. 84). Such a change was necessitated by rising costs. The new Bulletin Editor, is Dr. D.M. Davies. I am confident members will give him all the help they so generously gave me, and for which I am thankful.

Au revoir à tous et merci de m'avoir donné l'occasion de vous servir.

B.J.R. Philogène

REPORT OF THE PRESIDENT

Vancouver, 1979

Each year the President of the Entomological Society of Canada presents a report to the Annual Meeting. In reviewing these reports, I found no set pattern. Some examined, in detail, the activities of the Society during the year, the progress in each phase of our work and the significance of the activity to the Society. Others have taken a more specific approach and dealt with a few major concerns or, at least, those issues that the particular President viewed as most important. For the most part, I have elected the latter pattern — not because the Society has not been active — it has, and progress has been good on several fronts. This progress, however, has been reported to the membership in the Bulletin and certainly Memoire 108, "Canada and Its Insect Fauna", is a most tangible expression of a major Society activity. I believe, however, that entomology, along with most of the other non-Medical Biological disciplines, is facing a real crunch in Canada and it is to this issue that I would like to direct your attention. I am convinced that as a professional Society, we must recognize the position we are in, understand the reasons why we find ourselves in this position and take immediate steps to improve our lot.

Firstly, our current position.

In his address to the Entomological Society of Canada in Victoria in 1971, President Baldwin addressed the issue of a dwindling resource of manpower in entomology in Canada. He expressed understandable concern that the largest employer of entomologists in Canada, the then Research Branch, Canada Department of Agriculture, had only 200 entomologists. He went on to indicate the distribution of these entomologists and to point out that of these 200, 93 were in Ontario, 48 of which were in Ottawa and 22 in Belleville. President Baldwin was concerned by the attrition of entomologists that had already occurred, the fact that those remaining were so centralized and wondered how this small number and distribution of entomologists could possibly serve the needs of Canada. I am sure all of us wish that we could return to the manpower situation of 1971. I wonder what President Baldwin would think now. In our manpower study completed in 1975, we could find only about 140 entomologists in the Research Branch of Agriculture Canada and there has been significant further attrition since that time. In forestry, the situation is even worse. Perhaps President Baldwin's concern about the distribution of entomologists has been dealt with, but I am not convinced that the closing of the Belleville laboratory or reduced complement in Ottawa was what he had in mind. From one end of this country to the other, the number of entomologists has been reduced in operational departments of government to the point where in both agriculture and forestry we are unable to cope with current problems or direct any significant resources to the kinds of comprehensive studies so desperately needed to resolve entomological problems.

A few examples will illustrate what I mean.

1. Spruce budworm control.
2. The forest insect survey.
3. An early warning system for vector control (human and animal diseases).
4. A rational approach to nuisance pests.
5. Excessive losses to insects despite current control attempts.
6. Problems with insecticides:
   (a) resistance in insects
   (b) spiralling costs
   (c) environmental effects
      (i) natural environment
      (ii) human health
7. Non-chemical approaches to insect control.
8. Integrated pest control.
9. Pest monitoring.

ALLOCUTION DU PRÉSIDENT

Vancouver, 1979

Chaque année lors de la réunion de la Société Entomologique du Canada, le président présente un rapport. La lecture des rapports antérieurs ne m'a pas permis de déceler l'existence d'un modèle de base unique. Certains présidents y ont analysé en détail les activités de la Société pour l'année écoulée, les progrès réalisés, et l'importance pour la Société de chacune des étapes du travail accompli. D'autres ont adopté une approche plus spécifique, préférant mettre l'accent sur des points d'importance majeure ou du moins considérés comme tel par le président lui-même. C'est principalement pour cette dernière formule que j'ai opté, et ce, non pas parce qu'à mon avis la Société a été inactive, bien au contraire, des progrès sensibles ont été réalisés sur plus d'un front. Cependant, ces réalisations vous ont déjà été communiquées dans le bulletin, et vous admettrez avec moi que le mémoire no. 108 intitulé "Canada and its insect fauna" témoigne de la façon la plus tangible de l'activité au sein de notre Société. Je crois par ailleurs que l'Entomologie, et cela s'applique aussi aux autres disciplines biologiques non-médicales, est sérieusement menacée au Canada et c'est sur ce point précis que j'aimerais attirer votre attention. Je crois fermement qu'en tant que Société professionnelle, nous nous devons de constater l'état pitoyable de la situation dans laquelle nous sommes, d'en analyser les causes, et enfin de prendre immédiatement les moyens qui s'imposent pour faire en sorte que notre condition d'améliore.

Premièrement, notre situation actuelle.

Dans son allocution devant la Société, à Victoria en 1971, le Président Baldwin soulevait le problème de la baisse des ressources humaines en entomologie au Canada. Il exprimait alors avec raison son inquiétude à l'égard du plus important employeur d'entomologistes au Canada à l'époque, soit la Division de la Recherche du Ministère de l'Agriculture du Canada, laquelle n'avait alors à son emploi que 200 entomologistes. Il faisait de plus remarquer qu'un examen de la répartition des entomologistes au pays révélait que de ce nombre, 93 se trouvaient en Ontario dont 48 à Ottawa et 22 à Belleville. Le Président Baldwin, préoccupé par la baisse des effectifs déjà encourue et par la centralisation de ceux qui étaient encore en place, s'interrogeait sur les possibilités réelles de satisfaire les besoins entomologiques du Canada avec des effectifs aussi pauvres et inégalement répartis. Je suis convaincu qu'aujourd'hui, nous souhaiterions tous retourner à la situation de 1971. Je me demande bien ce que le Président Baldwin dirait maintenant. Notre étude sur les ressources humaines, terminée en 1975, indiquait qu'environ 140 entomologistes seulement étaient encore à l'emploi de la Division de la Recherche d'Agriculture Canada, et la baisse s'est poursuivie de façon sensible depuis. En foresterie, la situation est encore plus déplorable. Le problème de la répartition des effectifs soulevé par le Président Baldwin a peut-être été réglé depuis, mais j'ai de la difficulté à croire que la fermeture du laboratoire de Belleville ou la réduction des effectifs à Ottawa étaient les solutions auxquelles il pensait. D'un bout à l'autre du pays, le nombre d'entomologistes a diminué davantage dans tous les secteurs opérationnels du gouvernement, à tel point, qu'il s'agisse de l'agriculture ou de la foresterie, nous sommes maintenant impuissants à faire face aux problèmes entomologiques actuels ou à mobiliser une partie raisonnable de nos ressources en vue des études globales pourtant essentielles à la solution des problèmes entomologiques.

Voici quelques exemples qui illustrent ma pensée:

1. La lutte contre la tordeuse des bourgeons de l'épinette.
2. La surveillance des insectes des forêts.
3. Le dépistage précoce des vecteurs de maladies humaines ou animales.
4. Le développement d'une approche rationnelle à l'égard des insectes nuisibles.
5. Les pertes excessives causées par les insectes nuisibles malgré les tentatives de contrôle actuellement en cours.
6. Les problèmes occasionnés par l'emploi des insecticides:

(a) résistance chez certaines espèces
(b) la spirale des coûts de production

With inadequate resources to respond to these pressing and sometimes tense economic and environmental aspects of entomological problems, we have little opportunity to do some of the more basic and academic studies so vital to the progress and excitement of our science.

Support for research in entomology at the provincial level has never been great, with the exception of Ontario and Quebec. In Ontario, the Ministry of Agriculture and Food maintains an ongoing program with the University of Guelph in agriculture and veterinary medicine and includes entomology in that package. In Quebec, the Ministries of Agriculture, Education and Lands and Forests provide, in a manner similar to NSERC, funding to entomological research in provincial Universities. One phase of entomology, that dealing with chemicals for insect control, receives some support from the Industrial sector, both in-house and through "grants-in-aid", but Canada's "branch plant" position in the field of insecticides ensures that such support will be indeed modest.

The Universities in Canada are the second largest employers of entomologists and in that sector the numbers of entomologists are pretty much holding steady. However, financial support for research in Universities is a problem. This is not to say support elsewhere is adequate — it is not.

University professors rely largely on the Natural Sciences and Engineering Research Council for support and a look at granting patterns there may be helpful. Research in entomology may be funded through any of the four selection committees of NSERC (Animal Biology, Cell Biology and Genetics, Plant Biology, Population Biology). The mean award given by these committees in 1971-72 was $8,136. Six years later, 1977-78, the mean award was $11,644. (i.e. an increase of 43% in six years). Additional funds were provided in the past year and the mean grant increased to $13,414. This represents a 65% increase in seven years, but a drastic decline in purchasing power. By contrast, the mean award in Medical Biology (MRC) was $15,700. in 1971-72 and $28,019. in 1977-78, an increase of 78.5% during the period that non-Medical Biology increased by 43%. No one would argue that medical research is not expensive, but we are dealing here with operational grants, not equipment and facilities. In this context, I have difficulty accepting that it is more expensive than non-Medical Biology, certainly not more than twice as expensive as suggested by these figures.

When I look at the attrition in manpower in entomology during a period when, as everyone knows, the public service was greatly expanding, and the grant- support statistics, I can only conclude that entomology in Canada has a low priority. We are not alone. I believe our sister non-Medical Biological Sciences share the same low priority.

As all of you know, a new federal government was elected this year. In their pre-election rhetoric, they advocated among other things, a sharp reduction in public service personnel and a marked increase in research and development. The President of Treasury Board, the Honorable Sinclair Stevens has made some suggestions on how the first of these promises will be met with a decision that only 2 of 3 public servants leaving their jobs will be replaced (August 15, 1979). I do not know what determines decisions made by politicians. Perhaps Mr. Stevens was inspired by the current rock hit by Meatloaf — "Two Out of Three Ain't Bad". I suggest that if he is applying this to entomologists in the public service, that 2 out of 3 is bad. That's the kind of cutback we had in the past decade and in the light of our needs in entomology, it is completely unacceptable.

The second point I would like to discuss, is why are we in this spot? As everyone knows, we are told over and over again, that governments are operating under restraint programs and dollars are just not available. I am at a loss to under stand how anyone can look at the federal and provincial budgets over the past decade and conclude that rapidly spiralling budgets represent restraint. Obviously money is available, but the vision of our politicians focuses only from one election to the next and in this astigmatic field of vision, the research and development essential to long-term progress loses focus and, hence, support. This is the large problem and it is shared by all of the sciences. But, even among the sciences and within the operational departments of the federal government, the priority for entomology has declined. Why?

(c) effets sur le milieu
  (i) milieu naturel
  (ii) santé humaine
7. Approches non-chimiques à la lutte contre les insectes.
8. La lutte intégrée comme moyen de contrôle.
9. Un système de dépistage des insectes nuisibles.

L'insuffisance de nos ressources face à ces problèmes économiques et écologiques urgents et dans certains cas ayant déjà atteint un point critique d'intensité, ne nous laisse guère l'opportunité d'envisager des études plus fondamentales et théoriques, études pourtant vitales pour le progrès de notre discipline et le maintien de l'intérêt qu'elle présente.

L'aide financière à la recherche entomologique au niveau provincial reste minimale sauf en Ontario et au Québec. Le Ministère de l'Agriculture et de l'Alimentation de l'Ontario poursuit un programme de collaboration avec l'Université de Guelph en agriculture et en médecine vétérinaire, programme qui inclut l'entomologie.

Au Québec les Ministères de l'Agriculture, de l'Education et des Terres et Forêts viennent en aide au secteur entomologique des Universités par des octrois semblables à ceux du CRSNG. D'autre part, la lutte chimique contre les insectes nuisibles est un des domaines de l'entomologie qui reçoit un certain appui financier de la part de l'industrie, soit de l'intérieur, soit sous la forme d'octrois de soutien; toutefois, la position "succursale de la maison-mère" qu'occupe le Canada dans le domaine des insecticides constitue une garantie que le soutien financier dans ce secteur restera plutôt modeste.

Au second rang des employeurs d'entomologistes au Canada viennent les Universités, et ici les effectifs humains sont demeurés plus ou moins stables. Cependant, le soutien financier pour la recherche pose un problème dans ce secteur. Cela ne signifie pas qu'ailleurs le soutien soit adéquat, il ne l'est pas. Les professeurs universitaires ont principalement recours au CRSNG pour l'obtention de subventions, et un aperçu de la répartition des fonds de recherches octroyés par cet organisme sera sans doute utile. La recherche entomologique est subventionée via l'un ou l'autre des 4 comités de sélection du CRSNG (Biologie Animale, Biologie Cellulaire et Génétique, Biologie Végétale, et Biologie des Populations). La moyenne des octrois accordés par ces comités en 1971-1972 était de $8,136. Six ans plus tard en 1977-78, la moyenne était de $11,644 (c.a.d. une augmentation de 43% en 6 ans). Des fonds additionnels furent accordés l'an dernier, si bien que la moyenne des octrois est passée à $13,414. Cela représente donc une augmentation globale de 65% en 7 ans, bien qu'en fait cette augmentation constitue une baisse marquée du pouvoir d'achat. Par comparaison, la moyenne des octrois accordés en Biologie Médicale (CMR) était de $15,700 en 1971-72, passant à $28,019 en 1977-78, soit une augmentation de 78.5% comparée à 43% pour la Biologie non-médicale durant la même période. Personne ne nie que la recherche médicale coûte cher, mais il est question ici d'octrois de fonctionnement et non pas d'octrois d'investissement pour l'achat d'équipement ou d'installations majeures. De ce point de vue, j'ai de la difficulté à croire que la Biologie Médicale coûte plus cher que la nôtre; en tout cas certainement pas deux fois plus cher comme le suggèrent les chiffres que je vous cite.

Lorsque je constate la diminution de la main-d'oeuvre en entomologie au cours d'une période durant laquelle, comme chacun le sait, la fonction publique a connu une croissance pour le moins remarquable, je ne peux que conclure que l'entomologie au Canada ne constitue pas une priorité d'importance majeure. Cependant nous ne sommes pas seuls car je crois que les autres sciences biologiques non- médicales partagent avec nous le bas de l'échelle des priorités.

Comme vous le savez, un nouveau gouvernement fédéral a été élu cette année. Dans sa rhétorique pré-électorale, l'équipe maintenant en place préconisait entre autre une réduction sensible du personnel de la fonction publique et une intensification de la recherche et du développement. Le Président du Conseil du Trésor, l'Honorable Sinclair Stevens nous a laissé entrevoir la façon dont il entend s'acquitter de la première de ces promesses en annonçant que seulement 2 fonctionnaires sur 3 quittant leur emploi seront remplacés (15 août 1979). Peut-être que M. Stevens s'est inspiré du succès populaire du groupe Meatloaf "Two

To a large extent, entomology developed in Canada as a response to the need for entomologists in agriculture and forestry. For many years, beginning in 1884 with James Fletcher, this development was guided by a Dominion Entomologist. In 1914, the then Dominion Entomologist, Gordon Hewitt, established the Entomological Branch within the Department of Agriculture, thus giving entomology a high status within the system. This high status was reduced in 1938 when entomology was downgraded to a Division of the newly formed Science Service, but even this status was lost when the Science Service and the Experimental Farm Service were amalgamated in 1959. At that time, the central thrust in entomology in Canada was lost. Those of you of my vintage, or older, will have no difficulty recalling who the most important entomologist in Canada was when we entered our profession. It was not some eminent university professor, or the president of the Entomological Society of Canada. It was the Dominion Entomologist. He directed entomology in Canada, he gave entomology visibility and status and at the decision-making tables in Ottawa, he made sure that entomology received the high priority it deserved. The institutional reorganizations within the federal government have removed the leadership for entomology that fostered its development in Canada. This is one of the reasons for our current position.

The other main reason we are where we are, has to do with us as entomologists. Perhaps with the protection afforded by the Dominion Entomologist, we became too apathetic, too satisfied with our lot and too assured that someone would look after us. I once heard a characterization of the church which (and I paraphrase), said it was a bit like a hippopotamus — "thick skinned, slow-moving and not very adventuresome". There was a time when I believe that we as entomologists and the Entomological Society of Canada might have fitted that description.

If that once was the case, it is no longer true. As pointed out by President Wellington, when he addressed the Society a year ago, our past Presidents and others within the Society spoke bluntly of our concerns in the 1960's. These protestations were met with arguments that "things were not that bad", that "we were in a period of adjustment", and that "our concerns were not well founded". What we did not present and could not present were hard facts about the value of entomology to Canada and the need to strengthen our resource base in the discipline if the kinds of problems I listed earlier were to be avoided. What can we do about it now?

In his address last year, President Wellington pointed out that the traditional roles of Societies such as ours (i.e. providing meetings for people with kindred interests, publishing their work and talking to one another) would not sustain our Society in the current or projected environment in which biological sciences find themselves in Canada. He pointed out also, that our Society has recognized this and has taken initiatives through contract research and affiliations with other biologists to act in some more positive way. (I urge that you reread President Wellington's address to put these thoughts in context). There were two additional points (among many) in President Wellington's address that I would like to underscore, and to indicate how our Society proposes to take positive action. The first of these is the need to "demonstrate, not argue" the importance of our discipline to the management of Canada's renewable resources. In today's economic climate resources for research will be forthcoming only if hard data can demonstrate a highly favourable return on investment. You and I know that this is true for entomological research. We see it every day, but the Canadian public does not know it, the politicians do not know it, and we cannot prove it except in local and specific examples. We need to know how much insects cost Canada each year, how much we spend for their control and how much, in terms of dollar value, would be lost if no controls were practiced. Firstly, as a Society, we must get these answers. We must then make this information available to the public and finally "demonstrate" to the politicians and those who set priorities for research funding, not only the high returns possible through research in entomology, but the lost revenue for Canada if increased effort in this area is not immediately forthcoming.

During the past year, a proposal to obtain this information has been developed and it will be submitted to appropriate agencies for funding. We are convinced that much of the information we need is in the files of Canadian entomologists and we are sure that these entomologists will be more than happy to make these data available. We propose that the study

Out of Three Ain't Bad" (Deux sur trois, ce n'est pas si mal). Quant à moi je crois que deux sur trois, si cette décision doit s'appliquer aux entomologistes de la fonction publique, c'est plutôt mauvais. C'est exactement le genre de coupures que nous avons subies au cours de la dernière décennie et face à nos besoins en entomologie, c'est tout à fait inacceptable.

Le second point que j'aimerais discuter est celui des raisons expliquant le pourquoi de notre situation actuelle. Comme chacun le sait, on nous dit et on nous répète que nos gouvernements doivent opérer avec des budgets restreints et que les fonds ne sont tout simplement pas disponibles. Cela me dépasse, je ne comprends pas qu'on puisse conclure que l'augmentation effrenée des budgets fédéraux et provinciaux au cours des 10 dernières années démontre quelque tendance que ce soit à la restriction. De toute évidence les fonds sont disponibles, mais comme la vision de nos politiciens ne s'étend que d'une période électorale à l'autre, il n'est pas surprenant qu'à travers ce champ de vision astigmate, l'image perçue du rôle que jouent la recherche et le développement dans le progrès à long terme perde de son acuité et en conséquence le soutien financier approprié. Voilà le principal problème, et il se manifeste à l'endroit de toutes les sciences. Cependant, même parmi les sciences elles-mêmes, et à l'intérieur des secteurs opérationnels du gouvernement, la priorité accordée à l'entomologie à périclité. Pourquoi?

L'entomologie s'est développée au Canada surtout en réponse au besoin d'entomologistes en agriculture et en foresterie. Pendant plusieurs années, à partir de 1884 avec James Fletcher, le développement de l'entomologie était entre les mains de celui qu'il est convenu d'appeler l'Entomologiste du Dominion ("Dominion Entomologist"). En 1914 Gordon Hewitt, alors Entomologiste du Dominion, créait la Division de l'Entomologie à l'intérieur du Ministère de l'Agriculture, amenant ainsi l'entomologie à occuper un statut relativement élevé dans le système. Ce statut s'est vu diminué considérablement en 1938 alors que l'entomologie a été ramenée à une Division du Service Scientifique nouvellement institué. Ce statut déjà diminué disparut à son tour en 1959 lorsque le Service Scientifique et celui de la Ferme Expérimentale furent intégrés. C'est à ce moment précis que l'entomologie au Canada a perdu l'essentiel de son essor. Ceux d'entre vous qui sont de ma génération ou encore les plus âgés se rappelleront sans effort qui était l'entomologiste le plus important au Canada lorsque nous avons débuté notre carrière. Ce n'était pas quelqu'éminent professeur d'université ou encore le président de la Société Entomologique du Canada; c'était l'Entomologiste du Dominion. En effet c'était lui qui guidait l'entomologie au Canada, qui assurait sa présence et le maintien de son statut, et qui faisait en sorte que devant les instances décisionnelles à Ottawa, l'entomologie recevait la priorité qui lui revenait. Les remaniements institutionnels du gouvernement fédéral ont eu pour effet d'enlever à l'entomologie l'essentiel du leadership qui assurait son développement au Canada. Voilà une des raisons qui explique notre situation actuelle.

L'autre raison majeure expliquant pourquoi nous en sommes là aujourd'hui, nous concerne nous en tant qu'entomologistes. Il est possible que la protection que nous assurait la présence de l'Entomologiste du Dominion nous ait rendus apathiques, trop satisfaits de notre sort, et trop confiants que quelqu'un s'occuperait de nous. Je me souviens avoir entendu une description de l'Eglise qui disait (Je paraphrase) qu'elle était un peu comme un hippopotame: "La peau épaisse, pataude, et de caractère peu aventurier". Il fut un temps, je crois, où cette description aurait pu s'appliquer à nous entomologistes ou à la Société Entomologique du Canada.

Si tel fut le cas dans le passé, ce ne l'est plus aujourd'hui. Comme le soulignait le Dr. Wellington dans son allocution l'an dernier, nos présidents passés de même que divers autres membres de la Société ne se sont pas gênés pour exprimer ouvertement nos inquiétudes au cours des années "60". A nos protestations, on répondait "qu'en fait ça n'allait pas si mal que nous le prétendions", "que nous traversions une phase d'ajustement", et "que les motifs de nos inquiétudes étaient mal fondés". Ce que nous avons alors omis de produire et qu'en fait nous n'étions pas en mesure de produire, ce sont des faits solides démontrant de façon irréfutable la valeur de l'entomologie au Canada et le besoin pressant d'augmenter les ressources de base de notre discipline afin d'éviter les problèmes que j'ai énumérés tout à l'heure. Que pouvons-nous faire dans ces conditions maintenant.

follow the model used so successfully in the "Pilot Study for a Biological Survey of the Insects of Canada" (i.e. a small secretariat guided by a scientific committee of Canadian entomologists). Our proposal calls for a three-year project at the end of which time we will have the kind of data essential to succeed in our quest for due recognition of the benefits of entomological studies to Canada.

All of us realize that the economic cost of insects is only one of the many reasons for the profession of entomology. It is, however, a tangible expression and apparently this is the only kind of expression likely to be recognized in the current approach to research funding.

The second point in President Wellington's address was that our Society must be prepared to spend money to expand the activities of the Society and to perform such essential functions as lobbying, and keeping up with changing patterns of funding and other matters important to our Society. Anyone who has followed the Ottawa scene or tried to follow it, for the past few years, can only conclude that the logic for decisions is indeed obscure and that the rules often change before the latest set of directives gets back from the printers. Yet biological Societies must keep up with these changes, interpret them in terms of impact on their profession and exert an influence wherever possible to head off bad decisions. This can no longer be done totally by volunteer help. Your Society executives and the various chairmen and committee members are all busy people with full-time commitments to their employers. Most of them serve only for one or two years and during this time it is impossible to get an appreciation of the decision-making processes in Ottawa, or to develop liaison with those whose decisions affect our Society so vitally. In addition, arguing for the needs of our profession and obtaining data to substantiate these needs is not always popular, and when we ask our members to do this, we may be dealing with sensitive issues and jeopardizing the position and relationship of our members with their employer. We should not be asking our members to place themselves in such a position.

It is time our Society hired an executive secretary to keep abreast of the needs of our Society and maintain liaison with those whose decisions are so important to our welfare. At this time, we cannot afford a full-time employee although if and when our contracting-out becomes more extensive, this may change. At our Governing Board meetings this week, we approved the appointment of an executive secretary, on a part-time basis, to help us do the kinds of things I outlined above. This will be a major move forward by our Society to respond to today's needs. It will not reduce the need for continued volunteer efforts by our members, but it will permit these efforts to be well focused and more productive. Thus, our Society is moving to do the things it must. It is up to the Entomological Society of Canada to give leadership to entomology in Canada. As a professional body, we must determine the appropriate level of entomological manpower and other resources to meet Canada's needs. We must document these needs and advise government on priorities in meeting them. This will not be easy, but Canada's needs in entomology must be recognized and it is our responsibility to see that this is done.

In closing, I express my appreciation to the Society for the honor accorded me and the trust placed in me by electing me President. Despite the fact that the past year was a busy one, serving the Society has been a real pleasure. That pleasure would not have been possible had it not been for the excellence and willingness with which so many Society members carried out a large number of chores. I will make no attempt to name these people. You know them from reading the Bulletin. To all, my deepest thanks and appreciation.

L'an dernier dans son allocution, le Président Wellington soulignait que les objectifs traditionnels de sociétés comme la nôtre (c.a.d. d'organiser des rencontres entre personnes partageant des intérêts communs, de publier leurs travaux scientifiques, et de susciter l'échange d'opinions) ne pourraient plus désormais suffire à la survie de notre société, étant donné le climat dans lequel évoluent et continueront vraisemblablement d'évoluer les sciences biologiques au Canada. Il ajoutait de plus que notre Société avait pris conscience de cette réalité et avait pris certaines mesures incluant l'octroi de contrats d'études et l'affiliation à d'autres sociétés de biologistes afin d'améliorer l'efficacité de nos actions (Je vous invite à relire le discours du Président Wellington afin de remettre ces idées dans leur contexte). Il y a entre autres deux points additionnels du rapport du Président Wellington que j'aimerais souligner afin de clarifier la nature des mesures concrètes qu'entend prendre notre Société.

Le premier point est celui relatif à la nécessité qui nous incombe de démontrer, et non seulement de débattre, l'importance du rôle de notre discipline dans la gestion des ressources renouvelables du Canada. Dans le climat économique actuel, les subventions de recherche ne seront désormais accordées que sur la production de données solides démontrant que les bénéfices espérés sont nettement supérieurs aux investissements nécessaires. Vous et moi savons bien que cela vaut pour la recherche en entomologie. Chaque jour nous sommes à même de le constater. Mais le public canadien lui ne le sait pas, pas plus que les politiciens, et encore ne pouvons-nous le prouver que dans quelques cas bien spécifiques et d'importance localisée.

Nous nous devons de préciser combien les insectes coûtent annuellement au Canada, quelles sont les dépenses encourues pour leur contrôle, et quelles seraient les pertes monétaires encourues en l'absence de toute mesure de contrôle. Il nous incombe en premier lieu de trouver réponse à ces questions. Nous devrons ensuite rendre cette information accessible au public, et finalement apporter devant les politiciens et ceux responsables d'établir les priorités de recherche les chiffres démontrant les bénéfices substantiels qu'on peut attendre de la recherche entomologique, et inversement les pertes de revenu auxquelles devra faire face le Canada si un effort accru dans ce domaine n'est pas entrepris immédiatement.

Au cours de l'année qui se termine, un projet devant éventuellement nous permettre d'obtenir ce genre d'information a été préparé et il sera soumis aux agences appropriées pour fins de financement. Nous sommes certains que les entomologistes canadiens ont déjà dans leurs filières une bonne partie de l'information pertinente, et nous sommes de plus convaincus qu'ils seront plus qu'heureux de la rendre accessible. Nous avons proposé que cette étude suive le modèle utilisé avec succès lors de notre étude sur "L'inventaire Biologique des Insectes du Canada" (c.a.d. un secrétariat modeste dirigé par un comité d'entomologistes canadiens). Le projet proposé envisage une étude s'étendant sur 3 ans après quoi nous devrions disposer des données essentielles à l'atteinte de notre objectif global de faire reconnaître les bienfaits des études entomologiques au Canada.

Le deuxième point du discours du Dr. Wellington était que notre Société doit envisager de dépenser davantage afin d'élargir le champ de ses activités et de pouvoir s'impliquer dans de nouvelles activités aussi essentielles que le lobbying, la surveillance de près des changements dans la répartition des fonds de recherche, et autres activités qui concernent de près la Société. Quiconque a suivi ou essayé de suivre l'évolution de la scène gouvernementale à Ottawa au cours des années récentes, peut se permettre de conclure que la logique qui semble être à la base des décisions prises est pour le moins obscure, et que les réglements changent souvent avant même que les directives les plus récentes ne soient revenues de chez l'imprimeur! Malgré cela, les sociétés biologiques se doivent de se tenir à jour avec ces changements, d'en évaluer l'impact sur leur profession, et d'exercer les pressions nécessaires afin de contrecarrer celles des décisions qui leur sont néfastes. Cette tâche ne peut tout simplement plus reposer principalement sur les épaules du bénévolat. Les administrateurs des Sociétés de même que leurs Présidents et les membres de leurs comités sont des gens en général occupés avant tout et à plein temps à satisfaire leur employeur. La majorité d'entre eux ne demeurent au service de leur Société respective que pour un an ou deux, soit en fait une période trop courte pour bien saisir et évaluer les mécanismes décisionnels opérant à Ottawa, ou pour établir des contacts directs avec les instances décisionnelles pouvant affecter notre

Société de façon vitale. Il faut ajouter que la tâche de soutenir la cause des besoins de notre profession tout en justifiant ces besoins à l'aide de données irréfutables, est impopulaire et ne trouve pas facilement preneur. Lorsque nous demandons à nos membres de prendre une telle responsabilité, nous risquons en effet de placer ces personnes dans une situation plutôt inconfortable et de nuire à leur carrière et à leur relation avec leur employeur. Nous ne pouvons honnêtement demander à nos membres de se placer dans une situation pareille.

Il est donc temps que notre Société acquière les services d'un secrétaire exécutif qui soit au courant des besoins de notre Société, et qui maintienne des contacts avec les personnes dont les prises de décisions sont vitales pour notre bien-être. Pour l'instant nous n'avons pas les moyens de nous offrir un employé à plein temps quoique cette décision pourrait être révisée dans le futur advenant que nos possibilités d'offres de contrats extra-muros prennent de l'ampleur. Lors de la réunion du Bureau de Direction qui a eu lieu cette semaine, nous avons approuvé l'engagement d'un secrétaire exécutif à temps partiel dont les responsabilités seront celles que j'ai énumérées plus haut. Voilà une mesure concrète de taille mise de l'avant par notre Société en réponse à nos besoins. Cette mesure n'aura aucunement pour effet de remplacer le besoin que nous avons de l'aide volontaire de nos membres, mais plutôt de canaliser ces efforts bénévoles afin d'en augmenter l'impact.

Notre Société pose donc maintenant les actions qu'elle a le devoir de poser. C'est à la Société Entomologique du Canada qu'incombe la responsabilité de redonner à l'entomologie le leadership qui lui est dû. A titre d'organisme professionnel, c'est nous qui devons déterminer le niveau approprié des effectifs humains en entomologie, et celui des autres ressources devant permettre de subvenir aux besoins du Canada. Nous devons définir ces besoins, et conseiller le gouvernement dans l'établissement des priorités devant permettre d'y satisfaire. Cela n'est pas une mince tâche, mais les besoins en entomologie au Canada doivent être clairement reconnus et c'est à nous que revient la responsabilité de les faire reconnaître.

Pour conclure, je tiens à exprimer ma reconnaissance envers la Société pour l'honneur qu'elle m'a fait et la confiance qu'elle m'a accordée en m'élisant à la présidence. Même si l'année écoulée n'a pas été de tout repos, ce fut un plaisir pour moi de servir la Société. Ce plaisir je n'aurais pu le goûter sans l'excellence et la bonne volonté des nombreux membres qui ont participé à la tâche. Je n'ai pas l'intention de les nommer, leurs noms vous sont familiers pour les avoir rencontrés ici et là dans les pages du bulletin. A tous, mes remerciements les plus sincères et ma profonde gratitude.

———— || ————

Dr. D.M. Davies Department of Biology, McMaster University is the new Bulletin Editor. Dr. Davies is a former secretary of the Society.

Le Dr. Davies entre en fonction comme éditeur du Bulletin en janvier 1980

GOLD MEDAL ADDRESS
by G.P. Holland
Vancouver, October 2, 1979

Mr. President, Mr. Vice President, Members of the Awards Committee, Members of the Entomological Society of Canada, friends and relatives, I wish to thank you all for the honour you do to me today. Now that I have received the Gold Medal it is my responsibility to say a few words. I intend to keep it at literally a few words! Many of my predecessors, on receipt of their medals, have given weighty addresses, the distilled essence of their wisdom, and food for thought for future generations of entomologists. I am not going to do that; in fact I am going to read the few lines I am going to inflict on you because I am sure I would lose my place otherwise.

I am going to talk about Vancouver in the old days when I was a child here, about the University of British Columbia and one of the Professors who influenced my thinking, about Kamloops where I spent 12 happy years, and about my recent work on fleas — my swan song.

Vancouver, according to my earliest recollections, was a far cry from the metropolis today. Sailing ships were frequently towed through the Narrows. There was no Lions Gate Bridge. The empty lots which were common had the rotting stumps of great Douglas firs and giant cedars, trees that might be 8' across the butt, cut off about 10' above the base. These were relics of the early logging, when Vancouver had been covered by a climax forest of big trees. Lumber mills were all over the place and wood was so cheap that the secondary roads in town were paved with it, great planks roughly ten feet long, 15" broad and 4" thick, placed edge to edge for miles and miles. Sidewalks consisted of three planks, lengthwise, and were the bane of the existence of anyone who had a toy wagon as the wheels invariably got stuck in the cracks. There were horse-drawn rigs for delivering bread, or milk. The green grocer or vegetable Chinaman as we used to call him, drove around in a black-curtained wagon. Wood for fuel was drawn on two-wheeled carts, usually manned by a Hindu. I remember that they wore a gunny sack on their heads when it rained. I remember too before the first world war that we had a car, a 1912 Hupmobile, that wouldn't climb steep hills; my father had to go up such hills backwards, in reverse. This car had an acetylene generator on the running board, to feed the head lamps. During the war when we had no television and radio had not been invented, special editions of the newspapers were called "Extras", and boys went around yelling "Extra! Extra!"

We didn't have many toys. Plastic wasn't invented although celluloid and something called "composition" was known. But we had lots of home-made games. How many here are familiar with the terms peggy, or knobbies, or conkers, or milk-tops, or darts, or hoops? We made scooters of two kinds, one, more or less like a skate board with the front and back wheels of an old roller skate nailed to a piece of 2" x 4" with an apple box on the front, and the other a more elaborate version with wheels. Every boy carried a jack-knife. We collected postage stamps and cigarette cards, played scrub, flew kites, and chased the girls. We took the North Vancouver ferry, and the Lonsdale street car to the end of the line at Mosquito Creek and hiked up Grouse Mountain from the bottom, carrying a "bug", a 4 lb jam tin with a series of holes in the bottom made with a nail, the bail fitted on the side of the tin and a hole with a piece of candle stuck in it. At night this was a satisfactory substitute for a flashlight.

In the fall of 1928 I started University, not having the remotest idea of what I wanted to be. It was difficult to earn ones fees in those days; the Great Depression was just about starting. My first job at Spencer's warehouse paid the magnificent sum of $10.00 per week. The next year, though, and for the following two years, I worked at a logging company on Vancouver Island, for $55, a month, and board was provided. Eventually I got a job with The Strollers Concert Party, playing the accordion. We travelled up the coast in a 34' gas launch, all the way to Alaska, stopping at fish canneries, towns, Indian Villages etc. putting on a Vaudeville show followed by a dance. When I left the company at Prince Rupert that September, I found that 6 months of work had only netted me $200.00.

At University I became very interested in vertebrate zoology and historical geology. I wrote a couple of theses on turtles and I began to wonder who would employ me. It was only when I returned to University to take my masters that I discovered entomology and that wonderful man, Prof. George J. Spencer. He used to keep a live rattle snake in his office with a suitable warning on the door. He always greeted one with "Good Morning" at any time of the day. And he expected to be greeted back with a similar expression. I remember once when a student named Laurie McHugh discovered that he had a knotty problem with his thesis. He went downstairs to Spencer's office and knocked. A voice inside boomed "Come!" and he went in. "Good Morning McHugh" said Mr. Spencer. Laurie was so excited about his problem that he didn't return the greeting but launched into a discussion of the mystery — it took about 5 minutes. Then he paused and waited for the analysis that he expected. Mr. Spencer was silent, and then he repeated his earlier greeting, "Good Morning, McHugh". Laurie realized that he had "done wrong" and said "Good Morning Mr. Spencer". Spencer beamed and said "Now, McHugh, what is your problem?" And McHugh had to explain it from the beginning!

Mr. Spencer's lectures were full of anecdotes and nonsense but he covered the ground nevertheless, and one left the University with his entomological batteries fully charged. He had a wonderful record of successful graduates who became established in important positions in universities and government laboratories. I won't try to list them all, but Herb Ross of the Illinois Natural History Survey, and later the University of Georgia, and John Stanley, Professor of Entomology at Macdonald College were his first entomological graduates. Hugh Leech, Ken Graham, Cliff Carl, Morley Neal, Harry Andison, and Jack Gregson came along in the 30's and all made their mark in entomology or related disciplines. Bill Wellington, Buzz Holling, H.R. MacCarthy, Don Chant, Ron Stark, Bert Turnbull, Ron Forbes and Ray Foster, all of whom occupied important positions, graduated some time later. Ian McTaggart Cowan, former Dean of Graduate Studies, U.B.C., cut his entomological teeth at the foot of the Master. I venture to say that Spencer's record of producing enthusiastic biologists and entomologists is unparalleled in Canadian entomological history. Four out of 18 have been awarded gold medals from the Entomological Society of Canada. I have named only a few of his outstanding graduates; there are many more.

There are many other University professors who had an influence on me but I revere the name of Spencer above them all. He was unique. I did rather well in two courses in entomology that I had with him and then, when my reputation stood high, a vacancy occurred at the Livestock Insect Laboratory, Kamloops, B.C. and I was recommended to go there as a student assistant, Grade V, at $104.50 per month, on December 15, 1936.

I joined the Kamloops Outdoor Club the next day and met the girl I was ultimately to marry. Jack Gregson, whom I knew from days at U.B.C., was already at Kamloops and we continued the friendship we had established. At Kamloops we lacked a boss — Eric Hearle had died two years previously and Jack was considered too young to succeed him.

In July 1937 Allen Mail arrived from Bozeman, Montana, to take over this task. Later that year I approached him and said that I was very happy at Kamloops and was delighted to assist him and Gregson in their varied studies on ticks, warble flies mosquitoes and black flies but wanted something of my own, something to get my teeth into. Allen said to wait until tomorrow morning. Then he gave me a piece of paper with three words on it, fleas, mites and lice, and he informed me that these were three groups, hardly studied in Canada, whose taxonomy was in a mess, and which required investigation. I took the first word on the list, "fleas" and started to work on them. I am not finished with the fleas yet but I'm afraid I'll have to leave the "mites" and "lice" for someone else. My old friend and mentor, George Spencer, was of great assistance and placed all his flea material and his extensive correspondence with Dr. Julius Wagner of Belgrade, Yugoslavia, at my disposal.

So I started collecting fleas and puzzling out their names. I wrote to Ottawa to the Entomology Library for volumes of Novitates Zoologicae which contained important papers by N. Charles Rothschild and Karl Jordan and was informed that I could borrow this journal, one volume at a time, but they must be back in Ottawa two weeks after they were sent, and they were sent by rail. As it took the better part of a week to travel each way this didn't

leave me much time to read the articles and copy the illustrations which I did on tracing paper with india ink. I used to have a key to the postbox and I checked each night to see if another book had arrived, in which case I went down to the lab on Mission Flats and typed out the descriptions and copied the illustrations of the species that occurred in Western Canada.

A large collection of fleas made at Kamloops had been sent to Dr. Wagner for identification, these were returned but we received a wire instructing us to send them to Ottawa, unopened. As Dr. Wagner had recorded 62 species from British Columbia and they were mostly in Ottawa I wrote (naively) asking for pair of each of them for comparison with my new material. I received a very rude letter saying that if I wanted to play around with fleas that was my business, but under no circumstances would my identifications be respected in Ottawa. Under separate cover they begrudgingly sent me a collection of 8 fleas, a male and a female each of four species. So I continued my studies on my own, without reference to Ottawa.

Dr. W.J. Turnock

presenting the gold medal

of the E.S.C. to Dr. G.P. Holland

Well, my history has been well summarized in the brochure that accompanies this award. It remains only for me to give you a report on my current work, the fleas of Canada, Alaska and Greenland. This will be an extension of my Siphonaptera of Canada (1949) and will contain an up-to-date list of the 183 species and subspecies that occur or that are presumed to occur in the region. Alaska is an extension of Canada and Greenland is included because it is also part of the New World. Actually, the study covers the entire region north of the southern border of Canada.

The distribution of fleas in this area is interesting and is derived from two principal sources: (1), a beringian fauna, much of it derived from the refugium that persisted in Yukon Territory through Wisconsinan times and is characteristically Asiatic in nature, many of the species varying subspecifically from their Asiatic counterparts. I have illustrated Siberian as well as Alaskan forms in many of these instances. (2), a strictly Nearctic fauna that has occupied most of Canada since the Pleistocene glaciations.

In Greenland there are three species that are apparently missing from the Canadian or Alaskan arctic. As all three occur in northern Europe it is tempting to wonder if they are relics of the early Norse Viking settlements, particularly as two of them are found on fur-bearers, namely arctic foxes and weasels.

Some fleas are very host-specific whereas others are not, apparently preferring a type of environment in spite of the host or hosts. So on the 100 or so distributional maps which have been prepared the chosen host is sometimes shown and the ranges of host and flea are frequently not concordant. The limiting factor affecting flea distribution appears to be dictated by the larva which is free-living in the nest-debris of the host. The adult flea is active and frequently travels on the host whereas the soft-bodied larva is confined generally to the nest which may have different characters of temperature, humidity, and other features than in the fur of the mammal or bird in question. A common bird flea of the Pacific Coast from Alaska to South America that is found on many species of passerines does not occur east of the Coast Range in the Dry Interior.

The lemming flea which is common on the collared lemming is nevertheless absent from that mammal in the Queen Elizabeth, Sverdrup and Parry Islands and often less than hospitable arctic localities, presumably because of the ecological requirements of the larva.

Three species of fleas that occur on the bushy-tailed woodrat have only been recorded, in Canada, from the most southerly part of the range of that mammal which goes north to Yukon.

Two species of fleas have a remarkably disjunct distribution. Both occur in extreme northern Labrador, one each on deer mice and meadow voles, and otherwise occur in the Rocky Mountain system of Western Canada.

I have attempted to outline and comment on these distribution patterns of the 159 mammal-infesting and 24 bird-infesting species of fleas that are known or suspected to occur in the region. I have completed over 500 technical illustrations and provided keys to the 60 genera and 183 species dealt with. I don't know just when this work will be completed, let alone published. The text is almost finished, also the figures and maps. I hope that this winter I'll be able to turn it over to the stenographers, editors and critics, and call the task done.

And that is about all. I am very happy that this event took place in Vancouver, my home town, where my wife, my brother and his wife, his children, my aunt, and my wife's brother and sisters could be here. I also want to note Jack Gregson, my old pal of Kamloops days and all my other friends who are here.

And I wish to thank the Entomological Society of Canada, collectively, for the splendid honour they have done me.

Thank you all.

ELECTION 1980

The Nominating Committee (F.L. McEwen, Chairman) will prepare a slate of nominations for Second Vice-President, two Directors-at-Large, and two members of the Fellowship Committee.

Nominations from the membership may be submitted in writing over the signatures of at least three active members of the Society, with a signed statement from the nominee indicating his willingness to accept office if elected. Such nominations shall be submitted to the Secretary, Dr. J.E. Laing, Department of Environmental Biology, University of Guelph, Guelph, Ontario, N1G 2W1, not later than 31 March, 1980.

Dr. J.M. McNeil recevant les félicitations du président, F.L. McEwen, après avoir reçu le prix C. Gordon Hewitt.

FELLOWS OF THE SOCIETY — COMPAGNONS DE LA SOCIETE

Any four active members of the Society may present a nomination for Fellowship over their signatures. This nomination shall include a review of the nominee's contribution as support for the nomination. The contribution may be in any area — research, teaching, application or administration — and may be judged on the basis of contribution to and stimulation of the work of others, as well as by direct personal effort. It will usually, though not necessarily, be cumulative over ten years or more.

Members are requested to submit, by January 28, 1980, their nominations marked "Confidential" to the Chairman of the Fellowship Selection Committee, as follows:

Dr. M.D. Proverbs
Research Station
Agriculture Canada
Summerland, British Columbia
V0H 1Z0

Tout groupe de quatre membres réguliers de la Société peut formuler une mise en nomination de Compagnon de la Société. Cette nomination doit inclure un compte-rendu de la contribution du membre dans un ou plusieurs des domaines suivants: recherche, enseignement, application ou administration. On pourra également évaluer cette contribution en rapport à la stimulation du travail d'autres personnes aussi bien que sur le plan personnel. Ceci couvrira en général, mais pas nécessairement, une période d'au moins dix ans.

Les nominations, portant la mention "Confidentiel", devront parvenir au Président du comité de sélection, à l'adresse ci-dessus, au plus tard le 28 janvier 1980.

ACTIONS OF THE GOVERNING BOARD
September 30 — October 1, 1979

1. *Finance Committee*

   1) Requested the Executive Council to solicit advice on the legal and tax aspects regarding use and disposition of the surplus funds of the Society and revenues therefrom prior to the next Executive Council meeting.

   2) Authorized the Executive to spend a maximum of $15,000. to support the salary and expenses of an executive secretary of the E.S.C. on a part-time basis.

   3) Approved that subscription rates to the Canadian Entomologist be increased to $45.00 effective January 1, 1980.

2. *Publications*

   1) Directed that the Bulletin be published once a year with current production standards maintained and that a newsletter, of a typewritten form, be published quarterly.

   2) Accepted the recommendation that "scientific notes" not exceed 3 printed pages and that reprints of scientific notes may contain part of another page.

3. *Annual Meetings*

   Approved annual meetings as follows:

   1980 — with the Entomological Society of Quebec; Quebec City; October 6-8.

   1981 — with the Entomological Society of Alberta; Banff; Sept. 28-Oct. 2.

   1982 —joint meeting with the Entomological Society of America, Entomological Society of Ontario; Toronto; November.

4. *Insect Losses*

   Accepted the proposal for a study on insect losses and directed that it be presented for external funding.

5. *By-Laws*

   1) Approved changes to the By-Laws to establish the Assistant Scientific Editor as a Trustee of the Society.

   2) Approved minor changes in the Standing Rules to improve Society operations.

   3) Added, under Standing Rules, the Committee on By-Laws, Rules and Regulations.

   4) Added under Committee Guidelines, Continuing Committees, the guidelines for the By-Laws, Rules and Regulations Committee.

6. *Honorary Members*

   Directed that all nominations for Honorary membership, received from the membership for the past five years, shall be kept by the chairman of the Membership Committee or his deputy responsible for Honorary memberships. This file and records shall be passed in confidence to his successor.

7. *Fellows*

Requested the By-Laws, Rules and Regulations Committee to review the rules concerning Fellows of the Society and remove the condition that Fellows of the E.S.C. will cease to be Fellows if they cease to be members of the E.S.C.

8. *Employment*

Accepted the recommendation of the Employment Committee that they conduct a study to determine whether the manpower survey accurately predicted the employment situation for entomologists in Canada during the past 5 years.

9. *Archives*

Approved that the Society enter into an agreement with the Public Archives of Canada to deposit materials of the E.S.C. of historic interest with the Public Archives.

10. *Quebec Amateur Entomological Society*

Approved that each of the two branches of the Quebec Amateur Entomological Society may receive the regular publications of the Entomological Society of Canada for the nominal charge of $10.00 per annum.

11. *Governing Board Expenses*

Approved that full expenses may be paid by the E.S.C. to all Board members and Trustees who attend the annual Board of Governors meeting, and Committee members invited to attend the annual Board of Governors meeting beginning with the 1980 meeting.

12. *Publications*

Approved, subject to the concurrence of the Finance and Publications Committees and their recommendations for financing, that the E.S.C. would publish as a special publication, the major manuscripts resulting from the E.S.C. contract, "The Review and Synthesis of Knowledge on Northern and Arctic Insects".

13. *Awards*

Approved guidelines for a new award to recognize excellence in amateur entomology. The award to be named in honour of Norman Criddle, if the Criddle family approves.

October 4, 1979

1. *Executive Council*

Approved the make-up of the Executive Council as submitted (W.J. Turnock, President; S.R. Loschiavo, First Vice-President; W.G. Wiggins, Second Vice-President; F.L. McEwen, Past-President).

2. *Trustees*

Approved the names of the Trustees as submitted (E.C. Becker, Treasurer; J.E. Laing, Secretary; D.C. Eidt, Scientific Editor; C.A. Miller, Assistant Scientific Editor; B.J.R. Philogène, Bulletin Editor).

3. *Committees*

W.J. Turnock reported that a list of Committee Chairmen, Committee Members, and Representatives would appear in the Bulletin.

4. *Budget*

Approved the budget for 1980 as amended by the Treasurer.

5. *Joint Meeting of the Biological Societies of Canada*

The Board agreed that we respond positively to the suggestion of the Biological Council of Canada that there be a joint meeting of the biological societies of Canada to be held in 1983.

6. *Mid-term Governing Board Meeting*

Agreed that the mid-term Governing Board Meeting be replaced by an Executive Council Meeting during the 1979-80 year.

7. *Governing Board Meeting*

Announced that the next meeting of the Board of Governors will be held on October 4 & 5, 1980, in the Chateau Frontenac, Quebec City, P.Q.

MINUTES
29th ANNUAL GENERAL MEETING

Harborside Holiday Inn
City Centre
Vancouver, B.C.

October 3, 1979

President F.L. McEwen called the meeting to order at 2:00 p.m. There were approximately 70 persons in attendance.

Business — Amendment to the Agenda

Motion: B.J. Philogène moved, R.H. Burrage seconded that a section — 6.1 "Changes to Standing Rules" be added to the Agenda and the Agenda be accepted as amended. Motion carried.

1. *Notice of Meeting*

Notice of the meeting was published in the Bulletin, Vol. 11, March, 1979.

2. *Proxies*

There were no proxies received.

3. *Deceased Entomologists*

One minute of silence was observed in memory of R. van den Bosch, L.A. Carruth, Colin Curtis, T. Duff, C. Garrett, C. Lindroff, Douglas D. Munroe, H.H. Ross, and K.L. Schedl.

4. *Minutes of Twenty-Eighth Annual General Meeting (1978)*
The minutes of the 28th Annual General Meeting were published in the *Bulletin*, Vol. 10, December 1978.

Motion: H.V. Danks moved, R.F. DeBoo seconded that the minutes be adopted as published. Carried.

5. *Business Arising from Minutes*

There was no business arising from the minutes.

6. *Report of Governing Board*

The Governing Board report was presented to the members by President McEwen. The report will be published in the Bulletin.

Motion: R.F. DeBoo moved, Dr. Guthrie seconded that the Governing Board report be accepted. Motion carried.

6.1 *Standing Rules*

President McEwen asked the Secretary to read the changes in the Standing Rules. The changes are:

i) The Treasurer shall administer the gift subscription program and shall inform the Secretary of donors and recipients of gift subscriptions.

ii) The Secretary shall acknowledge donations to the gift subscription program.

iii) The Treasurer shall receive the ballots from the Secretary, shall arrange for their distribution to paid-up members of the Society who are eligible to vote.

iv) The Assistant Scientific Editor shall maintain a close liaison with the Scientific Editor and shall serve in his place during his absence from duty.

Motion: Moved by M.E. McGillivray, seconded by W.G. Friend that these changes be made to the Standing Rules. Carried.

President McEwen introduced Dr. J.P.M. Mackauer, who reported to the meeting on the activities of the B.C.C. on behalf of the President of the B.C.C., Dr. Mettrick. Dr. Mackauer pointed out that the B.C.C. would like to hold a joint meeting in 1983 of all biological societies of Canada and he extended an invitation to the E.S.C. to join the B.C.C. in this meeting.

Motion: J.P.M. Mackauer moved, G. Gerber seconded that the report of the B.C.C. to the E.S.C. be accepted. Carried.

President McEwen then asked Capt. Robert Wirts, Presidio, San Francisco, to speak to the Society regarding the Entomological Society of America's survey on insect allergies. Capt. Wirts reported that preliminary survey is being conducted for the E.S.A. on insect allergies. They would also like input from members of the E.S.C. The survey format to obtain further data will then be modified, if necessary, and published in the Bulletin of E.S.A.

7. *The Auditor's Report*

Motion: E.C. Becker moved, W.G. Friend seconded that we accept the Auditor's report. Carried.

8. *Election Committee Report*

President McEwen asked the Secretary to read the Election Committee Report. The Secretary reported that G.B. Wiggins was elected Second Vice-President. Drs. M.E.

McGillivray and H.F. Madsen were elected to the Fellowship Committee, Drs. W.G. Friend and M.D. Proverbs were elected to the Board of Directors, and that the majority of members voted for J.H. Phillips as Honorary Member.

Motion: Moved by R.F. Morris, seconded by D.C. Herne that the Election Committee Report be accepted. Carried.

9. *Installation of New Officers*

At this time, President McEwen thanked all those who had served the Society during the past year, then asked W.J. Turnock to take the chair as incoming President of the Society. Dr. Turnock asked F.L. McEwen to escort the First Vice-President, S.R. Loschiavo and the Second Vice-President, G.B. Wiggins to the dais.

10. *Service Awards*

W.J. Turnock presented Service Awards to the outgoing President, Dr. F.L. McEwen, and to Dr. B.J. Philogène who would be resigning as Bulletin Editor during the year.

11. *Election of Auditors*

Motion: E.C. Becker moved, B.J. Philogène seconded that the Society retain George Welch & Company as auditors for the 1979 year. Carried.

12. *Resolutions*

The following resolutions were read by B.J. Philogène.

1) Whereas the 29th Annual Meeting of the E.S.C., meeting in conjunction with the 78th Annual Meeting of the Entomological Society of British Columbia, in Vancouver, B.C., has been productive and enjoyable, and whereas the success of these meetings is the result of much preparation and work by the officers of both Societies and the organizing committees, be it therefore resolved that the Society express its appreciation to these officers and committees.

2) Whereas the province and people of British Columbia have provided assistance towards the cost of the banquet, be it resolved that the E.S.C. express their thanks to the Minister of Agriculture, of the province of British Columbia, and to the Provincial Secretary.

3) Be it also resolved that the Universities and the Companies listed in the program be thanked for their contributions to the success of this meeting.

4) Whereas the Holiday Inn, Harborside, has provided adequate quarters and courteous service for these meetings, be it resolved that the Society express its appreciation to the hotel management.

5) **Motion:** B.J. Philogène moved, Dr. Brust seconded that these resolutions be accepted. Motion carried.

6) B.J. Philogène then read a motion from the floor. The motion stated:

'Whereas support for research in scientific disciplines, including entomology, has been seriously decreased by governments in Canada, and whereas there is ever-increasing concern by society about rising costs of food and fibre, and whereas

the general public has demonstrated increased concern over the hazards to human health and the environment of using pesticides in production programs, and whereas integrated pest management programs are much more complex and require more scientific information and are much more labour intensive than our standard protective pesticide programs, and whereas there is a continuing need for new information on insects as industry develops in new regions of Canada, therefore be it resolved that the E.S.C. prepare a brief documenting these concerns and submit it to the federal and provincial ministers responsible for agriculture, forestry, health and environment, and thereby impress upon them the urgent need to increase support for entomological research'.

7) **Motion:** M.E. McGillivray moved, A.G. McGinnis seconded that the E.S.C. support this resolution. Carried.

13. *Other business*

President Turnock called for other business. There was none.

14. *Notice of the 30th Annual Meeting of the E.S.C.*

This meeting will be held in Quebec City, P.Q. on October 6, 7, & 8, 1980.

15. *Adjournment*

Motion: Dr. Craig moved, Dr. McNeil seconded that the meeting be adjourned. Carried.

"Mac" MacCarthy receiving his fellowship certificate from President McEwen in Vancouver.

AUDITORS' REPORT

To the members of ENTOMOLOGICAL SOCIETY OF CANADA

We have examined the balance sheet of the Entomological Society of Canada as at December 31, 1978 and the statement of financial activity for the year then ended. Our examination was made in accordance with generally accepted auditing standards, and accordingly included such tests and other procedures as we considered necessary in the circumstances.

As is usual in organizations of this kind, it was not possible to completely verify the revenue from all sources and therefore the statements show the recorded revenue.

These financial statements do not include the accounts of the Entomological Society of Canada Scholarship Fund.

In our opinion, subject to the foregoing, these financial statements present fairly the financial position of the Society as at December 31, 1978 and the results of its operations for the year then ended in accordance with generally accepted accounting principles applied on a basis consistent with that of the preceding year.

CHARTERED ACCOUNTANTS

Ottawa, Ontario
July 27, 1979

ENTOMOLOGICAL SOCIETY OF CANADA
(Incorporated under the laws of Canada)

BALANCE SHEET
DECEMBER 31, 1978

ASSETS	1978	1977
Cash	$ 57,650.43	$ 14,803.88
Accrued interest receivable	5,164.72	5,399.89
Accounts receivable	35,256.21	49,308.57
Term deposits — 8 3/4% due December 29, 1978		10,000.00
— 9 3/4% due January 15, 1980	25,000.00	25,000.00
Government and government guaranteed bonds — at cost — (quoted value $67,788; 1977 $71,481)	74,708.44	74,708.44
Other bonds — at cost — (quoted value $94,100; 1977 — $98,250)	95,000.00	95,000.00
	$292,779.80	$274,220.78

LIABILITIES AND SURPLUS

LIABILITIES			
Accounts payable and accrued liabilities		$ 25,045.31	$ 21,583.37
Prepaid memberships, subscriptions and reprints		19,479.48	29,409.00
Deferred revenue — advances re annual meeting			750.00
		44,524.79	51,742.37
SURPLUS			
Balance, beginning of year	222,478.41		216,749.72
add:			
Net revenue for year	25,776.60		5,728.69
Balance end of year		248,255.01	222,478.41
		$292,779.80	$274,220.78

STATEMENT OF FINANCIAL ACTIVITY

YEAR ENDED DECEMBER 31, 1978

		1978	1977
REVENUE			
Regular memberships		$ 27,064.85	$ 16,323.00
Student memberships		1,569.70	1,415.00
Sustaining memberships		500.00	250.00
Subscriptions		41,430.37	35,172.33
Sale of reprints including page charges		73,350.63	90,408.81
Sale of back issues		2,406.88	2,589.05
Publishing "Memoirs"		27,812.00	34,372.00
Interest earned		18,638.77	18,729.32
Gains on currency exchange, net of bank charges		6,229.29	2,919.46
Miscellaneous		1,595.87	
		200,598.36	202,178.97
EXPENDITURE			
Publishing costs — "Canadian Entomologist"	76,987.89		92,276.33
— bulletins	10,627.03		11,686.98
— reprints	4,775.20		6,519.04
— memoirs	23,572.77		26,951.91
Annual meeting — grants			443.13
— travel and expense	1,150.96		7,020.74
Other societies — dues and grants	3,155.00		22.00
Salaries	34,433.93		31,383.97
Directors' meeting expenses	5,236.89		5,309.32
Honoraria to Managing Council	1,700.00		1,600.00
Canada pension and unemployment insurance	1,464.46		1,490.09
Student encouragement	485.38		850.00
Professional fees	650.00		650.00
Postage and office supplies	5,767.79		3,482.36
Telephone	146.61		154.27
Rent	3,300.00		3,131.98
Editorial committee	393.97		1,923.01
General expense	2,092.39		908.85
President's discretionary fund	1,570.28		1,582.75
Scholarship award			500.00
	177,510.55		197,886.73
Less recovery in excess of cost re Faunal Survey	2,688.79		1,436.45
		174,821.76	196,450.28
NET REVENUE FOR YEAR		$ 25,776.60	$ 5,728.69

THE ENTOMOLOGICAL SOCIETY OF CANADA

BUDGET FOR 1980

RECEIPTS

		Can. Ent.	Memoirs	Society	Total
Memberships	800 @ $35	$ 20,000	$	$ 8,000	$ 28,000
Students	150 @ $10			1,500	1,500
Subscriptions	900 @ $45	40,500			40,500
Reprints		15,000			15,000
Page Charges (1275 pp. @ $59*)		75,225			75,225
Memoirs			3,000		3,000
Interest — Bank				1,000	1,000
Interest — Bond				18,500	18,500
Back Issues		2,500			2,500
Advertising in Bulletin				1,200	1,200
* Does not include the NSERC grant which runs out May 31, 1980		$153,225	$3,000	$30,200	$186,425

DISBURSEMENTS

Publishing Can. Ent. (inc. post.)	$102,000			$102,000
Reprints	8,000			8,000
Bulletin (inc. cost of adv.)			9,000	9,000
Office Exp. rent, telephone, post.	4,000		4,000	8,000
Salaries Managing Editor (full time)	28,440	3,160		31,600
Clerk (3/5 time)	4,310	695	4,310	9,315
Sec. Assist. for Editor	3,000			3,000
Executive Secretary			15,000	15,000
Sundry	500			500
Audit	375		375	750
Gold Medal, trophy, brochures, etc.			700	700
Trustees			1,600	1,600
Science Policy & Education Cte.			3,000	3,000
B.C.C. (460 Can. members @ $5.)			2,300	2,300
Annual Meeting (grants, honorees)			2,700	2,700
Executive Council (Interim Meeting)			1,300	1,300
Governing Board Expenses (inc. Trustees travel)			11,000	11,000
Exec. Travel to regular & other Soc. mtgs.			1,200	1,200
President's Discretionary Fund			750	750
Sec. Assistance for Secretary			1,000	1,000
Photo Salon			100	100
Common Names Cte.			250	250
Employment Subcte.			675	675
Membership List			2,000	2,000
	$150,625	$3,855	$61,260	$215,740

Total Receipts	$186,425
Total Disbursements	$215,740
DEFICIT	$ 29,315

Approved by Governing Board — October 4, 1979

COMMITTEE REPORTS

Annual report of the Secretary

The Secretary has maintained and updated the Society's files; recorded minutes of the Governing Board meetings and annual meeting of the Society; prepared ballots for the annual elections; prepared agendas for the meetings and notified the Executive Council, Trustees and members of the Board of Governors of forthcoming meetings; notified nominees of the election results; distributed minutes, reports and other materials as required; distributed scholarship forms, prepared notices for the Bulletin and generally provided liaison between the Executive and committees of the Society. The Secretary also provided a communication link between the Society and Affiliated Societies. Much of the Secretary's time was spent on day-to-day tasks and business of the Society and answering correspondence to the Society. Press releases for the Gold Medal and Hewitt Award winners were distributed to approximately 200 news outlets across Canada.

I would like to thank the Executive Council, Trustees and Board of Governors for the advice, help and cooperation without which my job as Secretary would have been much more difficult. I would also like to thank Dr. G.H. Gerber, Past-Secretary of the Society, for his help during the time when I took over my present duties.

J.E. Laing

FINANCE COMMITTEE

The Budget Review and Forecast, usually appended to the Report of the Finance Committee, is presented on this occasion as part of the Treasurer's Report. The items which follow are selected as highlights from discussions and are recommended for consideration of the Board.

I. *The Cash Reserve*. Currently approaching $250,000, this large balance remains as the most controversial and difficult item for the Committee. Contrary to the inclinations of the current executive, the Finance Committee believes professional advice (i.e. external) is required. The Committee considers the reserve as a possible threat to the non-profit status of the Society, and probably the major reason for the difficulty in obtaining deserving NRC publications grants. *The Committee solicits the advice and guidance of the Board regarding the disposition of the cash reserve.*

II. *Executive Secretary*. A special report was presented to the Executive at the time of the April meeting at Winnipeg. Resulting particularly from deliberations of a subcommittee chaired by P.G. Fast, the report indicated that a full-time appointment was not practical. Instead, the engagement of a Public Relations Consultant on a 3-year ca. $10,000 contract probably would be more suited to the needs of ESC. However, after further discussion and at the request of the Executive, the sum of $15,000 is reserved for this purpose in the new budget forecast for 1980. This reconsideration is based in part on the healthy balance situation anticipated for the current year. *Therefore, the Committee recommends the expenditure of $15,000 maximum in support of salary and expenses of an Executive Secretary.*

III. *Publications*. The Committee has been relatively inactive in this area although future liaison with the Publications Committee is anticipated. Also, there has been relatively slow progress in the area of advertisements in the *Bulletin*; ads continue to trickle in without the services/assignment of an Advertising Agent.

IV. *Subscription Rates. The Committee recommended to the Executive increase in the Subscription Rate from $40.00 to $45.00 effective Jan. 1, 1980.*

V. *Membership Fees. The Committee recommends no further increases at this time.*

VI. *Support for Annual Meetings. Review of financial statements/situations after annual meetings at Toronto, Winnipeg and Ottawa, the Committee recommends no increase in the Society's grant-in-aid.*

In closing, it must be mentioned that this report was prepared during the absence of several vacationing members. The Chairman hopes that most if not all, views and opinions are fairly and accurately presented. Our thanks are extended to the Executive and the Board of Directors for valuable suggestions and advice received during the past year.

Respectfully submitted,

J.S. Kelleher, Ottawa
E.C. Becker (exofficio), Ottawa
D.C. Herne, Vineland
J.C. Cunningham, Sault Ste. Marie
P.G. Fast, Sault Ste. Marie
J.C. Edwards, Sault Ste. Marie
G.M. Howse, Sault Ste. Marie
R.F. DeBoo, Sault Ste. Marie

PUBLICATIONS COMMITTEE

The Publications committee has made recommendations on ways of reducing costs in the Canadian Entomologist, reduction in time between receipt of manuscripts and publication, Scientific Notes in the Canadian Entomologist, Book Reviews, French in the Canadian Entomologist, reduction of costs in production of the Bulletin, the covers of the Canadian Entomologist including the Notice to Contributors, waivers of page charges for manuscripts submitted to the Canadian Entomologist, and restriction of material acceptable to the Canadian Entomologist. In addition, a continuing dialogue has existed with the Scientific Editor, a new Associate Editor has been appointed with responsibility for morphology and ultrastructure, and more that 50 books have been reviewed and notices published in the Bulletin.

R.P. Bodnaryk, C.R. Ellis, R.J. Lamb, G. Pritchard (Chairman), J.D. Shorthouse. *Ex officio*: D.C. Eidt, B.J. Philogène, F.L. McEwen.

SCIENTIFIC EDITOR'S REPORT

From the time of my appointment at the 1978 Annual Meeting until the time of reporting to the Governing Board at the 1979 Annual Meeting, manuscripts were received at the rate of about 4.5 per week. This includes papers of all lengths for both *Can. Ent.* and *Memoirs*. Of 221 papers received up to 13 August 1979, 16 were published, 69 were approved and awaited publication, 28 were rejected, 4 were withdrawn, 52 were under review, and 52 were returned to authors for revision.

In my mandate, two points were stressed: that some papers published were substandard, and that time from submission to publication was too long. Both have improved.

The rejection rate can be calculated in various ways, but a good estimate is 23% based on number of papers or 21% based on number of pages. This is 3 to 4 times the rate of recent years. All rejections were based on at least two reviews and an editor's assessment, as were acceptances.

The time from submission to publication has been reduced due to a shorter review time and less delay at the printer. Review time has been shortened by prompter mailing and frequent reminders to Associate Editors and reviewers. Printing time was reduced largely through efforts by Miss McBride, Dr. Becker, and the Publications Committee to persuade the printer to give prompter service.

Some changes have been made on the cover of *The Canadian Entomologist*, notably inclusion of a section about Scientific Notes in the Notice to Contributors. A joint effort by your Editor and the Publications Committee to make the "Notice to Contributors" available in French and to improve the journal as a medium for French-language papers is underway but recently slowed because of my distraction by other matters.

I thank Miss Margaret McBride, Managing Editor, for a year of excellent, efficient service, also the Associate Editors who are listed on the inside front cover of each *Can. Ent.* issue, Mr. Charles Miller our first Assistant Editor, and Dr. Gordon Pritchard and his Publications Committee for support and a lot of hard work.

D.C. Eidt

REPORT OF THE BULLETIN EDITOR (1979)

Volume 10 of the Bulletin (1978) had 120 pages and was published with two supplements: the report on the funding of university research in entomology; the membership list. This volume also carried advertisements from three companies. Volume 11 will have reached 68 pages by September 1979. Here again the same three companies have advertized.

It is obvious that the publication of the Bulletin has become an expensive endeavour for the Society. The advertisements we have had so far do not represent a large enough input to offset publication costs. I do not foresee any increase in such ads.

Apart from Committee reports, book reviews and regular announcements concerning meetings the membership has not made use of the Bulletin to express their views. Consequently if the format changes one should not expect a major revolt, particularly when one considers that the Bulletin is sent to members at no additional cost!

The Publications Committee will most probably submit a proposal at this meeting (Sept. 29-30) consequently I will not discuss the matter further at this time.

B.J.R. Philogène

REPORT OF THE SCIENCE POLICY-PUBLIC EDUCATION COMMITTEE — 1979

The major concerns of the Committee are employment opportunities for graduates in entomology, public image of entomologists, public relations to promote entomology in Canada and costs and benefits of entomological research. These concerns have a basic theme, namely, the need for justifying entomology in Canada, especially in a climate of budgetary restrictions. As a step towards showing that support for entomological research is justified, the Committee recommended to the Executive Council that the Society establish a committee to study the economic importance of insects to Canada and to write a proposal for funding a project on the costs and benefits of entomological research and development. The Committee further recommended that the Society establish a part-time post of executive-secretary to give continuity to Society affairs and that the Governing Board seek grants-in-aid to partially finance the post.

The other recommendations approved at the Executive Council meeting were:

1) That the Governing Board be requested to circulate the Mackauer Committee report on university funding to provincial and federal funding agencies and to the Biological Council of Canada.

2) That the Governing Board approve the expenditure of $300.00 for the publication in French of the Career Brochure.

The Committee supports the idea of attracting media interest in entomology and seeking professional expertise to stimulate public interest. It encouraged the use of exhibits in shopping malls, the preparation and publication of a complete list of resource people, the writing of popular articles about entomological research for nation-wide distribution, and soliciting lobbying support for R and D from the business community. A notice on the publication of popular scientific articles will appear in the Bulletin. Affiliate societies are being invited to undertake projects like the one started by the Entomological Society of Quebec.

The Committee supports Society participation in international entomology. Close contacts should be maintained with Interciencia. The Society could act as a clearing house for requests for help in coordinating international programs. It should consider cooperating in the Entomological Society of America's project to conduct an insect allergy survey.

Members are reminded that the Gift subscription sub-committee falls under the SP-PE Committee to which they can direct requests about donations of Society publications.

W.G. Friend, T.D. Galloway, J.N. McNeil, R.K. Steward, R. Trottier, S.R. Loschiavo (Chairman)

SIXTH REPORT OF THE SCIENTIFIC COMMITTEE FOR THE BIOLOGICAL SURVEY OF THE INSECTS IN CANADA

Since the previous report submitted in March 1979 for the April 1979 Executive Council Meeting, the following major activities should be noted:

1. Danks, H. V. (ed.) 1979, *Canada and its Insect Fauna, Mem. Ent. Soc. Can.*, 108: 573 pp. was published at the beginning of April, 1979. It has now been distributed to Society members, subscribers and various libraries. Copies have also been sent to a number of societies and publications for review.

2. The Secretariat has commenced the scientific work related to the "Review and Synthesis of Knowledge on Northern and Arctic Insects" (the Northern contract).

3. The "Yukon project" has been launched by members of the Scientific Committee. Drs. Scudder and Wiggins have been able to put two field parties into the north to start the long term study of the insect fauna of the Beringian refugium and adjacent areas. The UBC field party started studies in the last week of May; the ROM field party, to which Dr. J.A. Downes is attached, commenced their Yukon work at the beginning of June. Both parties expect to remain in the field until late August-early September.

4. The B.C. introduced Carabidae project undertaken by Dr. J.R. Spence is being continued. Extensive sampling has been carried out on Vancouver Island and throughout the coastal and interior areas of B.C.

5. Dr. G.E. Ball has resigned from the Scientific Committee.

6. The next meeting of the Committee is scheduled to take place in Ottawa, 25-26 October, 1979.

Submitted on behalf of the Scientific Committee by G.G.E. Scudder, Chairman

G.G.E. Scudder

E.L. Bousfield
K.G. Davey
J.A. Downes
A. Francoeur
P.P. Harper
D.K. McE. Kevan
V.G. Marshall
J.V. Matthews
F.L. McEwen
R.F. Morris
D.M. Rosenberg
I.M. Smith
A.D. Tomlin
G.B. Wiggins

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

Two meetings of the CSA Committee on Common Names for Pest Control Chemicals were held in the past year— one on December 12, 1978 and the most recent on August 2, 1979. During the December meeting 41 common name proposals were considered and 21 were approved for inclusion on the CSA Standard Z-143. During the August meeting a draft revision of Standard Z-143 was considered and approved with minor amendments.

The new Standard Z-143 will be published and available early in 1980. It will include all the common names that have been approved to date.

L. Roadhouse

9th ANNUAL INSECT PHOTO SALON
October 2-3, 1979

As the title indicates, the Entomological Society of Canada has held a number of insect photo salons. This year, for the first time, the salon was conducted in accordance with the standards set forth by the Photographic Society of America, and the response was most gratifying.

The subject matter for this salon was Insects and related arthropods (or jointed footed animals), such as crabs, spiders, centipedes, harvestmen and woodlice. It was most interesting to analyze the entries with respect to the major groups or orders of insects and related arthropods. This information will be of interest to the entomologists (only 3 of a total of 110 entrants are members of the Entomological Society of Canada and only one a member of the Entomological Society of America), but perhaps more so to those photographers who wish to seek out the less photographed groups of insects and perhaps even make a contribution to science.

	Prints	Slides	Total
Lepidoptera (Butterflies & Moths)	50%	39%	41%
Hymenoptera (Bees, Wasps, Ants, etc.)	9%	11%	11%
Hemiptera (True Bugs, Leafhoppers, etc.)	7%	11%	13%
Araneae (Spiders)	7%	10%	9%
Odonata (Dragonflies & Damselflies)	12%	6%	7%
Coleoptera (Beetles)	2%	8%	7%
Diptera (Two-winged Flies)	10%	3%	4%
Orthoptera (Grasshoppers)	2%	3%	3%
Dictuoptera (Mantids, Roaches, etc.)		2%	2%
Neuroptera (Lacewings, Mantid flies, etc.)		1%	1%
Grylloptera (Crickets, etc.)		1%	.7%
Crustacea (Crabs, Woodlice)	2%	.6%	.7%
Ephemeroptera (Mayflies)		.3%	.2%
Megaloptera (Dobsonflies)		.3%	.2%
Trichoptera (Caddisflies)		.3%	.2%
Opiliones (Harvestmen)		.3%	.2%
Parasitiformes (Ticks)		.3%	.2%
Diplopoda (Millipedes)		.3%	.2%
Chilopoda (Centipedes)		.3%	.2%

It is obvious that the lepidoptera constitute the most popular subject matter, with moths (mainly of the silkworm moth family, saturniidae) in the lead. Twenty-five percent of the lepidoptera entries were of larvae, again mainly of moth larvae (saturniid and sphinx moths). Excluding the groups represented by only one photograph, it is interesting to note that the hemiptera had the highest percentage of acceptances, followed by lepidoptera, spiders, dragonflies, and grasshoppers.

We were most impressed by the overall quality of the submitted entries, and on behalf of the Entomological Society of Canada wish to extend out thanks to all of you who entered, contributing to the success of this salon. We hope to see your work again. We wish, also, to thank those who contributed in every other way to the success of the 9th Annual Insect Photo Salon.

Print Statistics

58 Prints Submitted, 38 Prints Accepted

(22 Entrants representing 4 Canadian Provinces, 2 States, and one other country)

Canada:	Alberta	4	U.S.A.:	Colorado	1
	British Columbia	4		New York	3
	Ontario	8			
	Quebec	1	England:		1

Award Winning Prints

1st	Burmeister, R.M.	Robber Fly
2nd	Burmeister, R.M.	**Philaenus leucophthalmus** (Hemiptera)
3rd	Webb, T.	Alfalfa on Thistle Bud
Honorable Mention	Stahlman, L.S.	Resting Fritillary

Slide Statistics

363 Slides Submitted, 276 Slides Accepted

(95 Entrants Representing 6 Canadian Provinces, 14 States and 5 other countries)

Canada:	Alberta	5	Ontario		21
	British Columbia	3	Quebec		3
	Manitoba	3	Saskatchewan		1
U.S.A.:	California	11	Nevada		2
	Florida	6	New Jersey		2
	Idaho	1	New York		4
	Illinois	5	North Carolina		2
	Louisiana	1	Ohio		3
	Massachusetts	2	Pennsylvania		2
	Michigan	7	Texas		3
Australia		2	Republic of South Africa		1
Belgium		1	West Germany		3
France		1			

Award Winning Slides

1st	Cherof, M.A.	Io Moth Depositing Eggs, No. 2
2nd	Miller, F.A.	Question Mark, No. 18
3rd	Toman, F.E.	Bluet Damselflies Mating, No. 4

Honorable Mention:

Balma, S.J.	Green Ants Attracting Araneus Spider, No. 2
Cherof, M.A.	Parastic Cocoons on Saddleback
Gruenewald, R.	Painted Lady, No. 4
Harder, P.R.	Tomato Hornworm
Hawkins, W.W.	Spider, No. 2
Palinkas, L.E.	Ichneumon
Parsons, H.B.	Parasitizing Inch worm
Timmer, J.	Painted Lady, Underwing
Webb, T.	Bumblebee Moth, No. 1 Feeding in Flight
Zorn, M.	Queen Honeybee Depositing Eggs, with "court"

The salon was advertised in the Bulletin of ESC, the Bulletin of ESA, Photo-Canada, The bulletin of the National Association of Photographic Art, and in the PSA Journal. The response has been most encouraging. On request, 127 entry forms were mailed out, and later others were mailed to entrants who had not requested them, bring the total number used to nearly 200.

A total of 110 entrants, representing 8 countries (6 Canadian provinces and 15 states) submitted 363 slides and 58 prints. Most of the entrants are members of the Photographic Society of America. Many of the Canadian entrants had evidently responded to the notice published in Photo Canada. Only 3 entrants are members of ESC and one a member of ESA.

The costs incurred to date:		
	Xeroxing	— $ 7.40
	Printing	— 17.92
	Postage	— 43.92
	Telephone	— 20.50
	Misc.	— 1.63
	TOTAL	$91.37

— Total estimated cost (including postage for return of entries, engraving the shield, and cash awards); $350.00
— Amount received (entry fees & return postage); 275.00
— Estimated net cost 75.00

The following recommendations for future salons are suggested by the chairman. There may be further recommendations or revisions after collaborating with the local convener.

1. The entry form could perhaps be condensed (in collaboration with the Aids and Standards Chairman of the Nature Division, PSA). The entry form should include a request for permission to copy entries for publication in the catalogue, and for exhibition slide sets.

2. Gummed return address labels (3, perhaps 4) should be included with the entry form.

3. If entries were received by, judging arranged by, and entries returned by the local convenor, the amount of time required for return of entries, report cards, etc. would be reduced, making the salon eligible for special recognition by PSA. Winners in such salons are eligible for medals awarded by PSA in recognition of an efficiently run salon. We did not apply for special recognition this year, as the timing was uncertain. Also, there would be less chance of damage to entries and approximately $30 in

postage would be saved. However, the local convener would have a considerably heavier work-load, which could perhaps be alleviated if he had a local committee.

4. Since the location of the Annual meeting differs from year to year the local convener and his committee would also differ. In the interest of continuity there should perhaps be a constant chairman to oversee the salon. His responsibility would be to advertise the salon, to draw up and distribute the entry forms. He would be involved with producing the catalogue as well.

5. The catalogue this year will be little more than a list of award winning and accepted entries, including the basic essentials. If advertising could be solicited from photographic supply manufacturers, etc. perhaps a better catalogue, including reproductions of the award winning photos, could be produced.

6. The cash awards to be made this year consist of: $25.00 for each of the two first prize winners (slide section and print section); $15.00 for each of the two second prize winners; and $10.00 for each of the two third prize winners. Although the primary incentive to PSA members appears to be accumulation of points in the PSA star rating system, cash awards may still serve as incentive to non-PSA members, from which there were a fair number of entries this year. Therefore, perhaps the cash awards should be continued.

7. The local convener should be appointed, and the chairman of the salon notified as soon as possible so that preparations for the next salon can be initiated at an early date.

We wish to thank all those who contributed to the success of the 9th Annual Insect Photo Salon, especially the editors of the above-mentioned publications for advertising the salon, and to the three judges, Dr. John Borden, Mr. Wes. McDiarmid, Mr. Basil Fox, whose task was perhaps the most difficult of all.

Respectfully submitted
William B. Preston, Chairman
Ron Long, Local Convener

INSECT COMMON NAMES AND CULTURES COMMITTEE

COMMITTEE MEMBERS:

C.R. McLellan (Kentville, N.S.)
D.B. Finnamore (Fredericton, N.B.)
R.O. Paradis (St. Jean, Que.)
D. Herne (Vineland, Ontario)
A.G. Robinson (Winnipeg, Man.)
H. Craig (Saskatoon, Sask.)
E.M. Belton (Burnaby, B.C.)
J.C. Kelleher, C.C. Loan,
P. Syme, W.Y. Watson

During the past year the "Noms français d'insectes au Canada" — Agriculture, Quebec has been entered into the computer. Preliminary copies of this list will be sent to committee members for comment and amendment. When suggestions from the committee have been received and incorporated into the computer, a final list will be prepared and presented to the society for consideration.

Six new names have been approved by the committee and will be incorporated in the master list. One new name is being considered by the committee at the present time.

The form on which proposals for common names are submitted is being redrafted as a bilingual form. This new format should be available early in 1980.

W.Y. Watson,
Chairman.

HERITAGE COMMITTEE

The need for a permanent and accessible depository for E.S.C. archival material has been considered by this committee and the E.S.C. governing board. We recommend the acceptance of the offer of the Public Archives of Canada to accept the material, maintain and index it, and have it available for examination or copying. It is anticipated the board will act on this matter in the 1979 board meeting. The history, in the form of proceedings, annals and reports, of the Affiliate Societies are now nearly complete in our collection or in libraries as published material. We wish to acknowledge and thank affiliate societies and the individuals concerned for their efforts and cooperation. There is a great need for the recording of more of the historical entomological events both past and current including biographies and the help of any interested person is solicited.

Heritage Committee 1978-79

A.W. MacPhee, Chairman
R.O. Paradis
C.V.G. Morgan

EMPLOYMENT COMMITTEE

The employment committee compiled and published a booklet containing the resumés of E.S.C. members who are in search of employment. Seventy two resumés were received and two hundred copies of the booklet published. These were sent to the employers of entomologists in Canada.

THE SCHOLARSHIPS AWARD COMMITTEE

Contributions for 1979 to the Scholarship Fund as of 31 August amounted to $908.00. The fund is currently worth $9,367.00, and accrued interest for awards as of 1 January 1980 will be $1300.00.

Six applicants applied for the E.S.C. 1980 Post-Graduate Scholarship awards. The successful candidates were: Mr. P.R. Everson, University of Alberta and Miss P.W. Shefter, University of Toronto.

Continued support of the scholarship fund, by all members, is earnestly solicited.

Ray F. Morris
Chairman

MEMBERSHIP COMMITTEE

A number of new memberships in the E.S.C. were obtained, mostly from students. A new membership application form was prepared in both French and English and distributed to Committee members, the Finance Committee and the Quebec Society. A computerized membership list was completed and published in the Bulletin.

A total of three sustaining memberships from Industry were obtained which is not overwhelming, but three better than the Society had a year ago.

Dr. Howard Phillips was nominated for the single vacancy on the Honorary Membership list. His nomination was approved and the E.S.C. voted in favor of his appointment as an Honorary Member.

CANADIAN NATIONAL COMMITTEE OF THE INTERNATIONAL ASSOCIATION ON WATER POLLUTION RESEARCH (CNCIAWPR)

1. The CNIAWPR has broadened its membership base (see enclosed letterhead) and will continue to do so.

2. The role of activities of CNCIAWPR are currently being re-defined to expand and improve the organization's services to the scientific community and the needs of water pollution research in Canada.

3. Preparations for the 1980 meeting in Toronto continue. Conference themes include (a) ecological problems of lakes and large impoundments, (b) estuarine, coastal and marine pollution problems, and (c) water and waste-water problems in arctic and subarctic regions. The workshop on ecological and health significance of persistent substances in the aquatic environment should be of particular interest to members of E.S.C. The post-conference seminar on ecotoxicology, planned for Ottawa, may also be of interest. Refereeing of submitted papers to be selected for the program begins in September.

David Rosenberg
E.S.C. Representative
to CNCIAWPR

RESEARCH/EXTENSION SURVEY COMMITTEE

The final report of this committee, titled "THE FLOW OF ENTOMOLOGICAL INFORMATION WITHIN THE RESEARCH/EXTENSION SYSTEM", has been submitted to the Governing Board of the Entomological Society of Canada. The work of the committee is complete and it should be discharged.

W.J. Turnock, R.F. DeBoo, M.G. Dolinski, R.J. Whitman, Chairman

ANNUAL MEETING COMMITTEE (1980)

The Entomological Society of Quebec has completed the preliminary arrangements for the 1980, annual meeting, to be held jointly with the Entomological Society of Canada in Quebec City on 6-8 October 1980.

Dr. C. Cloutier, Laval University has been nominated by the E.S.Q. as general chairman of the organising committee.

The meetings will be held at the Chateau Frontenac where room charges will be $44.00 single and $54.00 double per night. Parking will be available at $3.50 to $4.00 per 24 hours.

Plans are being made for a symposium entitled "Overwintering survival strategies of insects in Canada" as well as several special interest groups and submitted papers.

Jeremy N. McNeil
(Director from E.S.Q.)

BY-LAWS AND STANDING RULES

The appointment to the By-laws and Standing Rules Committee, now a continuing committee of the Society, were completed by the President in late February. The committee has been concentrating on the preparation of its own Guidelines and minor corrections in the Standing Rules.

A. Comeau, D.M. Davies, M. Ellen MacGillivray

Recent Death

GRAY, Harold E., Oakville, Ontario. On September 4, 1979, age 81. Retired head, former Stored Products Unit, and associated with the Grain Commission. Former member ESC, ESO.

IUFRO WORKING PARTY ON BEECH BARK DISEASE ESTABLISHED

This disease complex, resulting from scale insect (*Cryptococcus fagisuga*) and fungal (*Nectria* spp.) attach of *Fagus sylvatica* and *F. grandifolia*, is currently causing serious losses in some plantations in Europe and natural forests in North America.

A working party on beech bark disease, proposed at an EEC-sponsored colloquium on this problem in France (May 1979) has been established.

The objectives of this working party are to provide the forum for discussion (and exchange of information) of current research progress and future research needs on this important international problem. Forest pathologists and entomologists from Europe and North America actively involved with beech bark disease are invited to participate in this working party. Those interested persons not already members of the working party should contact David R. Houston, USDA Forest Service, 151 Sanford Street, Hamden, Ct. 06514 USA or David Wainhouse, Forestry Commission Research Station, Alice Holt Lodge, Wrecclesham, Farnham, Surrey, U.K.

MEMOIRS OF THE E.S.C.

No. 109 "A revision of the genus Tachyporus Gravenhorst (Coleoptera: Staphylinidae) of North and Central America" by J.M. Campbell. 95 pp. Issued 25 September 1979.

MEMBERSHIP LIST — OMISSION

Dave D. Chadee
Dept. of Zoology
University of the West Indies
St. Augustine, Trinidad, W G

THE COST OF DESTRUCTIVE INSECTS IN CANADA

Each year practically all the acreage of fruits and vegetables, and such field crops as potatoes, tomatoes, tobacco and rutabaga in Canada are treated with insecticides to control insects. In addition, rape seed is treated for fleabeetle control, grains for wireworm control, corn for control of the corn rootworm, and eight million acres of forests are treated annually for insect pests, mostly the spruce budworm. Insecticides are used also against foliar pests of most forage and cereal crops (limited acreage treated) and insects attacking greenhouse and nursery crops, livestock and stored products. To this can be added heavy use of insecticides to control mosquitoes and blackflies and house and garden pests. There are more than 500 species of destructive insects in Canada and sales show that the Canadian public spends more than $50,000,000 annually for insecticides alone in efforts to effect control.

The requirement that insects be controlled to protect human and animal health, maintain our forest resources and provide high quality yields in agricultural products has been accepted in Canada and public funds are used to support entomological research designed to learn about insects and develop acceptable methods for their control. The federal government plays the dominant role in research although most provinces also participate, some in a major way.

Despite the long history of research on insect pests in Canada there has been little effort toward identifying the economic impact of insects or developing cost-benefit analyses for various methods of insect control. Perhaps this was due, in part, to the rapid development of new insecticides after World War II and the hope that these would provide control economically and safely. This did not happen and entomologists in Canada and elsewhere are completely reassessing insect control strategies. These reassessments demand that we know the costs of insects so that costs for control can be assessed in terms of a cost-benefit analysis.

The Entomological Society of Canada proposes to conduct a study to determine the cost of destructive insects in Canada. This proposal arises from the need to place priorities on research in Canada as part of the development of a long-range science policy and to determine the potential for economic benefits through research in entomology.

The study will be conducted by a Secretariat consisting of an experienced economic entomologist and a secretary. This Secretariat will be guided and assisted by an expert scientific committee drawn from practising Canadian entomologists and research managers. This scientific committee will serve to assess the adequacy and validity of available data and its extrapolation to reflect the total Canadian situation. It will serve also to determine areas where economic data on insect losses are not adequate or available and to suggest ways by which such data may be obtained.

The study will be of three years' duration and will result in a major publication setting forth the monetary cost of insects in Canada in terms of direct losses sustained and costs of current control methods. The study will be submitted to Supply and Services Canada as an unsolicited proposal.

The following have agreed to serve on the Scientific Committee and to give special assistance in the area indicated:

Aubin, Antoine	Université du Québec à Trois Rivières Case Postale 500 Trois Rivières Quebec G9A 5H7	Biting flies

(Cont. p. 106)

LE CÔUT DES INSECTES NUISIBLES AU CANADA

Chaque année, presque toute la surface cultivée en fruits et légumes, au Canada, et des denrées comme les pommes de terre, les tomates, le tabac et le rutabaga sont traités aux insecticides pour éliminer les insectes. De plus, le colza est arrosé pour lutter contre les altises, les céréales contre les vers-fil-de-fer, le maïs contre la tisseuse des racines, et on traite également huit millions d'acres de forêts contre les insectes, particulièrement la tordeuse des bourgeons de l'épinette. On utilise également les insecticides contre les défoliateurs de la plupart des plantes fourrage et des céréales (surface traitée limitée) et contre les insectes attaquant les plantes de serre et de pépinière, le bétail et les produits emmagasinés. A tout cela il faut aussi ajouter une utilisation massive d'insecticides contre les moustiques et les mouches noires et contre les insectes des jardins et des maisons. Il y a plus de 500 espèces d'insectes destructeurs au Canada et les ventes d'insecticides seulement montrent que le public canadien dépense plus de $50,000,000 par année pour parvenir à les contrôler.

Le nécessité d'arriver à un contrôle des insectes afin de protéger la santé humaine et animale, préserver nos ressources forestières et donner des rendements de haute qualité pour les denrées agricoles, a été acceptée au Canada et on utilise les deniers publics pour financer la recherche entomologique entreprise pour connaître les insectes et développer des méthodes acceptables de lutte. Le gouvernement fédéral joue un rôle prédominant en recherche quoique la plupart des provinces y participent, certaines de façon majeure.

Malgré la longue histoire de la recherche sur les insectes nuisibles au Canada, il y a eu peu d'efforts en vue d'identifier l'impact économique des insectes ou de développer des analyses de coûts-bénéfices pour les différentes méthodes de lutte contre les insectes. Peut-être ceci a été en partie le résultat du développement rapide de nouveaux insecticides après la 2ème Guerre Mondiale, et de l'espoir qu'ils effectueraient le travail de façon économique et sûre. Ceci ne s'est pas réalisé et les entomologistes, au Canada et ailleurs, sont entrain de réévaluer entièrement les stratégies de lutte contre les insectes. Ces réévaluations exigent que nous connaissions ce que nous coûtent les insectes afin d'évaluer les coûts de lutte en termes d'analyse coût-bénéfice.

La Société Entomologique du Canada se propose d'entreprendre une étude pour déterminer ce que coûtent les insectes. Cette proposition découle du besoin qu'il y a de placer des priorités dans la recherche au Canada en tant que partie intégrante du développement d'une politique scientifique à long terme, et de déterminer le potentiel des bénéfices économiques à travers la recherche en entomologie.

L'étude proposée sera sous la responsabilité d'un secrétariat comprenant un entomologiste expérimenté, spécialisé en entomologie économique, et un secrétaire. Ce secrétariat sera guidé et assisté par un comité scientifique d'experts regroupant des entomologistes canadiens en fonction et des questionnaires de recherche. Le comité scientifique s'occupera d'évaluer la quantité de données disponibles et leur validité, et en fera l'extrapolation en vue de refléter la situation canadienne. Il s'occupera aussi de déterminer les domaines où les données économiques sur les pertes dues aux insectes ne sont pas suffisantes ou disponibles et de suggérer les moyens par lesquels on peut obtenir de telles données.

Cette étude sera de trois ans et conduira à une publication majeure soulignant le coût monétaire des insectes au Canada en terme de pertes directes et de dépenses occasionnées par les méthodes de lutte actuelles. L'étude sera soumise au Ministère des Approvisionnements et Services comme proposition non-sollicités.

Voici la liste de ceux qui ont accepté de siéger au Comité Scientifique d'experts:

Aubin, Antoine — Université du Québec à Trois Rivières
Case Postale 500
Trois Rivières
Quebec G9A 5H7

Bond, E.J.	Agriculture Canada Research Institute University Sub Post Office London, Ontario N6A 5B7	Stored products
Brust, R.A.	Department of Entomology University of Manitoba Winnipeg, Manitoba R3T 2N2	Biting flies
Carrow, J.R.	Pest Control Section Ontario Ministry of Natural Resources Maple, Ontario	Forestry
Cooper, G.S.	Cyanamid Canada Inc. Plaza One — 2000 Argentia Road Mississauga, Ontario L5N 1P7	Industry input
DeBoo, R.F.	Forest Pest Management Institute Department of Fisheries and the Environment 1219 Queen Street East P.O. Box 490 Sault Ste. Marie, Ontario P6A 5M7	Forestry
Ellis, C.R.	Department of Environmental Biology University of Guelph Guelph, Ontario N1G 2W1	Cereals
Gartner, Alfred	PCO Services Limited 232 Norseman Street Toronto, Ontario M8Z 2R4	Structural pests
Harris, C.R.	Agriculture Canada Research Institute University Sub Post Office London, Ontario N6A 5B7	Soil insects
MacPhee, A.W.	Agriculture Canada Research Station Kentville, Nova Scotia B4N 1J5	Fruits
Martel, P.	Agriculture Canada Research Station P.O. Box 457 St. Jean, P.Q. J3B 6Z8	Vegetables
McMullen, R.	Agriculture Canada Research Station Summerland, B.C. V0H 1Z0	Fruits
Morris, R.F.	Agriculture Canada Research Station P.O. Box 7098 St. John's, Newfoundland A1E 3Y3	Vegetables
Mukerji, M.K.	Agriculture Canada Research Station 107 Science Crescent Saskatoon, Saskatchewan S7N 0X2	Cereals
Paquet, Gerard	Eastern Spruce Budworm Council Quebec City, P.Q.	Forestry
Pree, D.J.	Agriculture Canada Research Station Vineland Station, Ontario L0R 2E0	Fruits

Shemanchuk, J.A.	Agriculture Canada Research Station Lethbridge, Alberta T1J 4B1	Livestock
Surgeoner, G.A.	Department of Environmental Biology University of Guelph Guelph, Ontario N1G 2W1	Livestock
VanSickel, Alan	Pacific Forest Research Centre Victoria, British Columbia	Forestry
McEwen, F.L.	Department of Environmental Biology University of Guelph Guelph, Ontario N1G 2W1	Chairman

---

BIOLOGICAL SURVEY PROJECT

Northern Contract

Nearly all of the salient arctic and subarctic references accessed through initial literature searches have been consulted. Other references continue to be discovered as specific taxonomic revisions are checked in preparing a list of North American arctic insects. Over half of the sections of this list are now complete and include over 1000 named species from North America north of treeline. Most of these sections have been checked by various taxonomic specialists. Several parts of the manuscript for the synthesis of information on northern insects are more or less complete. Manuscripts treating background information on northern areas have been reviewed and most are almost in final form.

Meeting of the Scientific Committee

The Scientific Committee met on October 25 and 26 in Ottawa. Among the matters discussed were the following:

Review and Synthesis of Knowledge on Northern and Arctic Insects

Progress with the manuscript of the synthesis (see above), and progress with the bibliography also being prepared, were discussed.

Since the contract does not allow funds for publication, options were considered for eventual publication of the two manuscripts to be produced.

It was learned that the Governing Board of the Entomological Society of Canada had approved the suggestion that the Society undertake to publish the synthesis volume (as the first of a new occasional series of Miscellaneous Publications, which could be sold to recover costs), and had referred the matter to its Publication and Finance Committees for advice.

Various suggestions for publication of the bibliography were discussed, including NSERC, governmental agency, private, or commercial funding. The first of these possibilities appeared to have the most potential.

Scientific priorities

The Scientific Committee developed and considered a list of possible projects in systematic and faunistic entomology stemming partly from the findings of the Pilot Study that might be encouraged by future survey initiatives and cooperation. These included: Yukon fauna, especially Beringia (see below); various regional possibilities, such as Newfoundland, the Magdalen Islands, Northern Quebec and Labrador; some wider faunal

topics, involving boreal (including bog) or prairie insects for example; the development of general tools for encouragement of faunistic work, such as keys to the Canadian insect families, faunistic methods, and distributional analysis; and a number of broad ecological topics, especially wetland or river faunas, and specific aspects of current concern, such as the effect of acid rain on arthropods. A projects subcommittee (I.M. Smith (Chairman), D.M. Rosenberg, A. Francoeur, A.D. Tomlin) was appointed to develop these ideas more fully. In addition, a subcommittee (V.G. Marshall (Chairman), J.V. Matthews, D.K. McE. Kevan, A.D. Tomlin) was appointed specifically to consider soil arthropods, which had attracted particular concern but no precise focus. The larvae of insects is another large topic, similarly difficult to focus, that will be considered by the projects subcommittee.

The committee also received reports on ongoing regional initiatives (see below).

Manpower in entomology

The committee considered a draft letter pointing out the damaging consequences of inadequate, and worsening, manpower in taxonomy. It was agreed to develop versions for transmission to relevant agencies of government, underscoring the specific effects that these inadequacies would increasingly have on research and other programs. Such letters were to be transmitted through the President of the Entomological Society of Canada.

Discussion with Government Representatives

Following the business meeting, the Committee met on the afternoon of Friday 26th November with representatives of interested government agencies and departments: the Biosystematics Research Institute, Canadian Forestry Service, Northern Environmental Protection Branch of Indian and Northern Affairs, Parks Canada, and the National Museum of Natural Sciences (the lead department for the Northern Contract). Commitments elsewhere had forced representatives of Ministry of State for Science and Technology, Department of National Defence, and National Science and Engineering Research Council to send their regrets.

A useful discussion by all participants included a statement by Dr. L.C. Lemieux, Director of the National Museum of Natural Sciences, who spoke of the function of the Museum in providing services to the scientific community at large, and the Museum's recognition of the need for biological surveys. He stressed the Museum's continuing support for the Biological Survey Project. Dr. Lemieux pointed out the Museum's need for assistance, advice and support from the scientific community, and he expressed interest in establishing an advisory council in this regard. He noted also the Museum's role in helping to generate public awareness of problems that the mission-orientated departments are trying to solve.

Several government representatives strongly confirmed the need for biological survey work on a long term basis as outlined by Dr. Lemieux. Members of the committee were pleased that the National Museum of Natural Sciences agreed so strongly with the Entomological Society's philosophy in this respect, for the Final Report of the Pilot Study had viewed the Museum — concerned as it is with acquiring and disseminating basic knowledge on the fauna and flora of the country — as the logical home for biological surveys generally.

Field initiatives

Newfoundland

In Newfoundland, the small elaterid project initiated during the Pilot Study has been almost completed and a report is being written, which should be ready in 1980. Mr. Ray Morris has collected 1500 specimens of Microlepidoptera in Newfoundland, and obtained several interesting records. Mr. Morris has also been asked to contribute a chapter on introduced terrestrial insects to a volume on Newfoundland in the *Monographiae Biologicae* series, to be published in 1981. A bibliography of insects of Newfoundland and Labrador (Memorial University) is almost complete and should appear in 1980.

During the 1979 field season six collectors and a leader for a project on Newfoundland insects were hired by Agriculture Canada through the Canada Manpower program for unemployed youth, and this project, directed by Mr. Morris, proved interesting and useful. Much material was collected from six locations in the province (see *Bull. ent. Soc. Can.* 11(2): 37); initial sorting is continuing. Another grant is to be sought for a similar project next year.

British Columbia

The project on introduced carabids, initiated during the Pilot Study and coordinated by Dr. John Spence, has continued with two extensive collecting trips in B.C. These contributed many records that are new, despite an earlier study of available collections. It is expected that a manuscript summarizing the results will soon be prepared. Projects begun or continued by Dr. G.G.E. Scudder include the preparation of keys to the families of B.C. insects, collecting and larval studies of dragonflies, and collecting in Chilcotin National Park, Northwest B.C. and Prince Rupert, as well as in the Yukon (see below). An expedition to the Queen Charlotte Islands may be made next year.

Ontario

The Parks Branch of the Government of Ontario is considering a long-term baseline survey of insects and arthropods in selected Ontario Parks, although budgetary constraints have made the timetable uncertain. Those interested in this possibility are asked to contact Dr. Ian Smith, (Biosystematics Research Institute, Ottawa), of the Biological Survey committee.

Québec

The annual meeting of the Société Entomologique du Québec was held in Chicoutimi in early October. As part of the programme, Dr. André Francoeur organised a discussion on systematics, which provided an interesting consideration of problems, even though relatively few workers in Québec are directly involved in systematic work. Collections of aquatic insects made by the James Bay Corporation are no longer of interest to the Corporation, and are being incorporated into the collections at Université de Montréal for preservation.

Yukon project

Two collecting parties visited the Yukon in 1979 (see *Bull. ent. Soc. Can.* 11(2): 37) as part of the initiative developed through the Biological Survey Committee and the cooperation of the University of British Columbia, the University of Alberta and the Royal Ontario Museum. The Royal Ontario Museum sent a 3-man party that travelled extensively between Kluane and the Richardson mountains from early June to mid-August 1979. One worker from the University of British Columbia was based at the Arctic Institute laboratory at Kluane from May through August, and another (Dr. Scudder) made two shorter visits. This party concentrated on pond and grassland insects in the southern Yukon. Both groups collected useful material that is now being processed. It is hoped that further collecting will take place next year, although details are not finalized. Discussions with the Biosystematics Research Institute indicate that two entomologists from the Institute will be in the Yukon in 1980. Interested individuals who could largely finance their own travel to the Yukon, but would like to profit from cooperative arrangements there, are asked to contact Dr. Scudder.

X X X X X X X X

EMPLOYMENT — EMPLOI

We have an opening in the Museum of Zoology, Insect Division for a Preparator, and would appreciate your putting the following advertisement in the newsletter for the next issue:

PREPARATOR

The Museum of Zoology of the University of Michigan has an opening in the Insect Division for a Preparator. The Insect Preparator mounts and labels specimens and assists with the care and maintenance of the Museum's Insect Collections. Necessary qualifications include a B.S. degree in Entomology or Biology with advanced degree work in Entomology or Biology preferred. Also, some training or experience in Entomological museum work is desirable. Please send Resume to Sandra Bowne, Museum of Zoology; 1080 Museums Bldg.; The University of Michigan; Ann Arbor, MI 48109. The University of Michigan is an equal opportunity, affirmative action employer.

NOTICE — ANNONCE

In 1979, the Entomological Society of Canada Employment Committee published a booklet containing the resumés of Entomological Society of Canada members in search of employment. This publication was considered very useful by employers of entomologists and as a result a second edition will be compiled and distributed. Those members who wish to be included in the brochure will be asked to submit resumés in a standard format by answering a questionnaire. The questionnaire will be made as flexible as possible to accommodate all. All student members (membership as of November 26, 1979) will receive these questionnaires through the mail while other members should request a questionnaire from:

The Chairman
Employment Committee
Entomological Society of Canada
c/o Dept. of Environmental Biology
University of Guelph
Guelph, Ontario
N1G 2W1

All requests for questionnaires must be obtained within two weeks of the mailing of this notice.

En 1979, le Comité de l'Emploi de la S.E.C. a publié un livret contenant les C.V. des membres à la recherche d'un emploi. Cette publication s'est révélée fort utile pour les employeurs et de ce fait une deuxième édition sera préparée et distribuée. Les membres qui désirent être inclus dans la nouvelle brochure devront remplir un questionnaire à cet effet. Tous les étudiants membres (membre depuis le 26.11.1979) recevront ce questionnaire par la poste. Les autres membres voudront bien demander ce questionnaire en écrivrant à l'adresse ci-dessus dans les deux semaines suivant la publication de cet airs.

PERSONALIA

Former President and Gold Medallist joins select group

Dr. William G. Wellington has been elected to the membership and designated a *Fellow* of the *Explorers Club*, because of the pioneering nature of his research. He thus becomes one of the very few Canadians to be invited to join this select group. Founded in 1904, the Explorers Club originally honored polar explorers such as Schackleton, Amundsen and Scott. Byrd and Lindbergh also were members. The present membership includes Sir Edmund Hillary, Neil Armstrong, Richard Leaky, Konrad Lorenz and Nikko Tinbergen.

We are pleased to report Dr. Wellington's election.

CALL FOR PAPERS

Symposium on
Hazard Rating Systems in Forest Insect Pest Management

A National Symposium on Hazard Rating Systems in Forest Insect Pest Management will be held at Athens, Georgia, July 31-August 2, 1980. The event is sponsored by the Society of American Foresters, the U.S.D.A. Forest Service, and the University of Georgia.

The theme will be the development and use of stand and the susceptibility rating systems for insect pests of North American forests. The aims of the symposium are: (1) to identify hazard and risk ratings methods in use in North America and land manager experience with them; (2) to investigate methods for developing, validating, and implementing rating systems; and (3) to identify where additional needs exist to improve the utility of rating systems.

Areas of particular interest are general approaches to development of rating systems, limitations of systems, problems in applying systems during low insect population level periods, systems for rating stand and tree susceptibility to bark beetles, defoliators, scales, root feeders, leaf miners, etc., and incorporation of rating systems into integrated forest management plans. Presentations of contributed papers will be limited to 20 minutes with 10 minute-discussions. Proceedings will be published.

Abstracts for contributed papers will be accepted for review until February 1, 1980. Submit 200-word reviewers abstract and title to:

Dr. Roy L. Hedden, Program Chairman
College of Forest and Recreation Resources
Department of Forescry
Clemson University
Clemson, SC 29631

BELTSVILLE AGRICULTURAL RESEARCH CENTER SYMPOSIUM V

The Beltsville Agricultural Research Center sponsors an annual research symposium with a specific theme. The subject of the fifth "BARC Symposium" will be "Biological Control in Crop Production". It is scheduled for May 19 to May 21, 1980. Subject matter will be presented as invited lectures and contributed posters with the lectures published in the BARC symposium series (5th volume). Previous symposia in this series were: (1) Virology in Agriculture, (2) Biosystematics in Agriculture, (3) Animal Reproduction, and (4) Human Nutrition Research: Questions and Answers.

Registration and a reception will be held Sunday evening followed by five technical sessions held Monday morning through Wednesday noon. The sessions are as follows:

Session 1 — Relevance of ecological theories to practical biological control.

Session 2 — Concepts, principles and mechanisms of biological control of pests.

Session 3 — Recent advances in mass production of biological control agents.

Session 4 — Strategies of biological control.

Session 5 — General considerations: Environmental, regulatory, safety, economic and biocontrol in integrated pest management systems.

Voluntary poster presentations will be held Monday from 5:30 to 7:30 p.m.

Registration fee $60.00.

Anyone wishing to receive a registration packet for this symposium should contact:

Publicity Chairman
Symposium V
Room 214, Bioscience Bldg 011A
BARC-West
Beltsville, Md. 20705

The **Association for Biology Laboratory Education**, A.B.L.E., will hold its annual meeting/workshop June 2-6 at the University of Illinois at Urbana campus. The purpose of this meeting is to exchange ideas on creative, innovative techniques used in the teaching laboratory. Scheduled workshops will accompany the meeting.

For more information contact:

Don Fritsch
Biology Department
Virginia Commonwealth University
Richmond, VA 23284

"If you want to be part of society you should go at least half way to meet it." (Eugene Munroe at his retirement party, November 16, 1979).

Entomology and the International Year of the Child

The October Issue of *Racine* (Vol. 1, No. 2) published by the Forrestry Service of Environment Canada is a special issue devoted to children. Dr. W.A. Smirnoff contributed the 19 page story.

We want to congratulate the author for his initiative.

BOOK NEWS

GENETICS IN RELATION TO INSECT MANAGEMENT, Edited by Marjorie A. Hoy and John J. McKelvey, Jr. (1979).

This book contains proceedings papers from an international conference of entomologists and geneticists with topics organized into the following sections: Genetics and Management of Pests; Genetics in Relation to Beneficial Organisms; and Genetic Components of Beneficial and Pest Arthropod Management. In a final chapter, the conference participants set forth guidelines for needed future research. Participants of the conference and contributors to the volume were: S.H. Berlocher, E.F. Boller, G.L. Bush, H.N. Comins, C. Curtis, H.T. Dulmage, D. Gonzalez, M.A. Hoy, M.D. Huettel, L.E. LaChance, B.R. Levin, N. Lorimer, J.J. McKelvey, W.C. Rothenbuhler, R.T. Roush, A.R. Templeton, M.J. Whitten and T. Yokoyama.

This volume is available free to interested individuals upon request from: Publication Office, Rockefeller Foundation, 1133 Avenue of the Americas, New York, N.Y. 10036.

———— || ————

LABORATORY COLONIES OF INSECTS AND OTHER ARTHROPODS IN CANADA — INSECTES ET AUTRES ARTHROPODES ELEVES EN LABORATOIRE AU CANADA.

The 1979 edition of the above-mentioned list is now available. A copy will be sent to those who request it from:

J.S. Kelleher
Pesticide Information Liaison Section
Research Program Service
Research Branch, Agriculture Canada
Ottawa, Ontario K1A 0C6

L'édition de 1979 de la liste dont le nom apparait plus haut est maintenant disponible. On peut en obtenir une copie en écrivant à l'adresse ci-dessus.

———— || ————

"The Man of Science appears to be the only man who has something to say just now — and the only man who does not know how to say it."

—Sir James Barrie

The 1979-80 Board. From left to right, S. Loschiavo, E. Becker, J. McNeil, J. Shorthouse, R. Storch, J.G. Arrand, M. Proverbs, J. Shemanchuk, D. Herne, W. Turnock (President), G. Wiggins, R. Burrage, P. Riegert, J. Laing (Secretary), R. Morris, W. Friend.

INTERNATIONAL COMMISSION ON ZOOLOGICAL NOMENCLATURE

c/o British Museum (Natural History)
Cromwell Road
London, SW7 5BD
United Kingdom

ITZN 59 1st. November, 1979.

The following Opinions have been published recently by the International Commission on Zoological Nomenclature in the *Bulletin of Zoological Nomenclature*, Volume 36, part 3, 1 November, 1979.

Opinion No.

1145 (p. 149) *Dryocoetes* Eichhoff, 1864 (Coleoptera, SCOLYTIDAE): conserved under the plenary powers.

1146 (p. 151) *Xyleborus* Eichhoff, 1864 (Coleoptera, SCOLYTIDAE): conserved under the plenary powers.

The Commission regrets that it cannot supply separates of Opinions.

The Commission hereby gives six months notice of the possible use of its plenary powers in the following cases, published in *Bull. zool. Nom.* Volume 36, part 3, on 1st November 1979, and would welcome comments and advice on them from interested zoologists. Correspondence should be addressed to the Secretary at the above address.

2240 *Anaspis* Müller, 1764; *Luperus* Müller, 1764; *Lampyris* Müller, 1764; and *Clerus* Müller, 1764 (Insecta, Coleoptera): proposed designation of a type species.

2244 *Ptilium* Gyllenhal, 1827 and *Ptenidium* Erichson, 1845 (Insecta, Coleoptera): proposed conservation.

2246 *Chrysomela flavicornis* Suffrian, 1851 and *C. tibialis* Suffrian, 1851 (Insecta, Coleoptera): proposed conservation.

2146 *Rhodesiella plumigera* (Loew, 1860) (Insecta, Diptera): proposed suppression.

COMMITTEES OF E.S.C.

Annual Meeting:	J.N. McNeil (c)	Quebec
	J.A. Shemanchuk	Lethbridge
	Vacant	Ontario
	W. Preston	Winnipeg
Elections:	R.A. Brust (c)	Winnipeg
	P.W. Arnfield	Winnipeg
	P.A. MacKay	Winnipeg
Employment:	D.J. Madder (c)	Guelph
	G.B. Kinoshita	Mississauga
	Scott MacDonald	Guelph
Fellowship Selction:	M.D. Proverbs (1980) (c)	Summerland
	F.J. Bird (1981)	Sault Ste. Marie
	J.R. Blais (1980)	Quebec
	G.S. Cooper (1981)	Mississauga
	M.E. MacGillivray (1982)	Fredericton
	H.F. Madsen (1982)	Summerland
Achievement Awards:	S.R. Loschiavo	Winnipeg
Finance:	R.W. Kobylnyk (c)	Ottawa
Heritage:	A.W. MacPhee (c)	Kentville
	P.W. Riergert	Regina
Insect Common Names and Insect Cultures:	W.Y. Watson	Waterloo
	J.S. Kelleher	Ottawa
Membership:	W.G. Friend (c)	Toronto
	H.J. Herbert	Kentville
	J.A. George	London
	J.-C. Tournier	Montreal
	J.C. Conroy	Winnipeg
Nominations:	F.L. McEwen	Guelph
	S.B. McIver	Toronto
	A.D. Tomlin	London
Publications:	R.P. Bodnaryk (c)	Winnipeg
	C.R. Ellis	Guelph
	R.J. Lamb	Winnipeg
	J.D. Shorthouse	Sudbury
	C. Cloutier	Quebec
Scholarships:	R.F. Morris (c)	St. John's
	W. Preston	Winnipeg
	B.S. Heming	Edmonton
	E.F. Johnson	Stoney Creek
	A.D. Tomlin	London
	J.-G. Pilon	Montreal
	J.P. Bourassa	Trois-Rivieres

Science Policy and Public Education:	G.B. Wiggins (c)	Toronto
	S.R. Loschiavo	Winnipeg
	W.G. Friend	Toronto
	S.B. Hill	St. Anne de Bellevue
	J.N. McNeil	Quebec City
	R. Stewart	Ste. Anne de Bellevue
	W.G. Wellington	Vancouver
Biological Survey of the Insects of Canada:	A. Downes (c) (1981)	Ottawa
	P.P. Harper (1980)	
	J.V. Matthews (1980)	Ottawa
	D.K. McE. Kevan (1980)	Ste. Anne de Bellevue
	G.C.E. Scudder (1980)	Vancouver
	G.B. Wiggins (1980)	Toronto
	E.L. Bousfield (1981)	Ottawa
	K.G. Davey (1981)	Downsview
	A. Francoeur (1981)	Chicoutimi
By-Laws, Rules and Regulations:	M.E. MacGillivray (c)	Fredericton
	A. Comeau	Ste. Foy
	D. Davies	Hamilton

REPRESENTATIVES

Biological Council of Canada:	W.J. Turnock	Winnipeg
	R.K. Stewart	Ste. Anne de Bellevue
	D.E. Bright	Ottawa
Canadian Committee on Water Pollution:	D.M. Rosenberg	Winnipeg
CSA Committee on Common Names for Pest Control Chemical:	L.A. Roadhouse	Ottawa
SCITEC:	S.B. Hill	Ste. Anne de Bellevue
	E.G. Munroe	Ottawa

ENTOMOLOGICAL SOCIETY OF B.C. — 1979-80

President Elect:	R. Forbes
President:	R. Elliott
Secretary-Treasurer:	B. Frazer
Directors:	R. Cannings
	L. Safranyik
	G. Miller
	D. Bates
	J. McLean
Regional Director to ESC:	J. Airand
Editor:	H R. MacCarthy