
ENTOMOLOGICAL SOCIETY OF CANADA

Bulletin



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Société des Entomologistes du Canada

Bulletin

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THE PRESIDENT'S REPORT

In this report, I will note a few of the activities of the Governing Board, the Executive Council and the Board Committees over the past year. I will not repeat the remarks contained in my Mid-term report which has been published in the September 1987 Bulletin (Vol. 19 No. 3).

Last fall, on behalf of the Society I wrote to NSERC responding to the report of the Ad Hoc Committee on Program Review. In particular, I pointed out that the Society was concerned about the Scientific Publishing grants, and hoped they would be continued. My understanding is that they are still in place in the grants program. The Treasurer has noted that the NSERC grant to the Society is up for renewal this year.

I also wrote to Dr. D.L. Johnson, Principal of McGill University concerning the fate of the Lyman Entomological Museum. I was assured that the collections will be guaranteed safe keeping.

It was a pleasure to communicate with Miss Alma Criddle on the donation of a number of inscribed copies of her book "Criddle-de-Diddle-ensis" for future winners of the Criddle Award. The Criddle Award this year, on recommendation of the Entomological Society of British Columbia, will go to Dr. Walter Lazorko of Vancouver. Unfortunately, he is ill and unable to leave home, so the award will be presented to him in Vancouver, as soon as this can be arranged.

ESC representatives J.E. Laing and O. Morris attended a Biological Control Workshop in Winnipeg immediately following the annual meeting last year. The Report on this workshop has just been published. This will be studied by the Science Policy Committee, with respect to future initiatives in this area.

The Science Policy Committee will also consider the new documents from Agriculture Canada entitled "Canadian Agricultural Research and Technology Transfer — Working Paper." The Committee will develop a timely response to these as requested, and will circulate copies of this response to members of the Governing Board, hopefully prior to the regional meetings which are planned by Agriculture Canada.

At the new Governing Board meeting last fall, an Ad Hoc Language Committee was established, to prepare recommendations of bilingualism within the Society. The draft of the resulting recommendations, published for information in the June Bulletin have now been approved by the Governing Board: the Board recommends that the Society approve appropriate changes in the Standing Rules.

Considering Memoir publications, the Finance Committee proposed that "All scientifically acceptable manuscripts submitted should be published without delay." This was accepted by the Executive Council, and the Governing Board has approved the proposal from the Finance and Publication Committees, that Memoir "Printing costs should be reduced by emphasizing the use of camera-ready copy." These two committees, working with the Scientific Editor, will investigate ways to reduce the cost of publishing the Canadian Entomologist. The Governing Board has agreed to a review of the publication schedule for the Bulletin, and the Executive Council has decided that current year subscriptions and page charges will remain as at present, but an ongoing review of these has been initiated.

The Membership Committee has followed up on persons failing to renew their membership. It would seem that there are a large number of forgetful entomologists. Renewal forms will be sent out soon, with a January 1 deadline to avoid penalty payment.

There are no new candidates for fellowships this year, as the Fellowship Committee reported that our Society membership numbers do not allow any new additions.

The Heritage Committee and the Insect Common Names and Collections Committee reported steady progress. The Insect Losses Committee reported that the final report on "The Economic of Insect Control of Wheat, Corn and Canola in Canada, 1980-1985" was completed and submitted to Agriculture Canada. The Governing Board congratulates the chairman, Dr. George H. Gerber, and the Study Team (Culice and Stemeroff Co.).

The Governing Board approved new guidelines for the student paper competition, prepared by the By-Laws, Rules and Regulations Committee. These will be published in the Bulletin. The Scholarship Committee will revise scholarship application forms for this year.

The Organizing Committee for the XVIII International Congress of Entomology, scheduled for Vancouver, July 3-9, 1988, reported that over 6,000 copies of the Second Brochure with abstract, accommodation and registration forms have been mailed so far. Deadline for abstract submission and reduced registration is January 15, 1988.

The Executive Committee was pleased to approve the recommendation from the Achievement Awards Committee that the Gold Medal recipient for 1987 should be Dr. J.N. McNeil. They were sorry that there was no Hewitt Award again this year. It is sad that we cannot find some of our under 40 entomologists worthy of recommendation for this award. As I noted in the Bulletin two years ago, they cannot nominate themselves. It is the responsibility of all of us to do this. Surely, we have some young entomologists we wish to recognize! There will be a new stream-lined procedure for nomination in future. We hope this will help to reduce some of the paper work. The Achievement Awards Committee needs your input.

At the meeting on September 26-27, 1987, the Governing Board reconsidered participation in the BCC Congress in Laval in 1990. In view of the fact that the Canadian Society of Zoologists will not take part in this meeting, and the Canadian Genetics Society has recently decided to withdraw, the Governing Board believes the aims of the Congress cannot now be achieved. The Governing Board has thus decided that the ESC will also withdraw from the Congress. We will not participate in the BCC Congress held at Laval.

The Annual General Meeting for 1990 will now be reconsidered. Invitations have been received from the Entomological Society of Alberta and the Societe d'entomologie du Quebec. A decision will be made by the new Governing Board.

I must report that the Governing Board has been wrestling for some time, over the future of the Employment Committee. It is now recommended that this be changed to the Student Affairs Committee, and given a revised mandate.

I hope I have given some idea of the activities over the past year. Clearly, I cannot cover every item in detail. However, the various Committee reports will be published in the Bulletin.

In closing, I wish to express my gratitude to those who have served with me on the Executive Council, the Governing Board, and the various Board committees. I wish to thank the Secretary, the various Editors, and the office staff. Finally, I wish to thank the Society as a whole for the opportunity to serve as President.

G.G.E. Scudder

JEREMY N. McNEIL — GOLD MEDAL, 1987

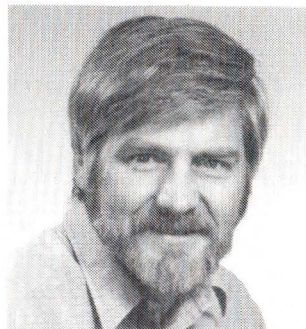
The 1987 recipient of the Entomological Society of Canada's Gold Medal for Outstanding Achievement in Canadian Entomology is Dr. Jeremy Nichol McNeil, Département de biologie, Université Laval, Québec. In presenting this Award, the Society recognizes his important contributions to the teaching of entomology in Canada, his pioneering studies of the ecological aspects of insect pheromone communication, and his dedicated service to the Society.

Jeremy N. McNeil was born in Tonbridge, Kent, England in 1944. He received his elementary education in Cornerbrook, Newfoundland, and his secondary education at Lansing College, Sussex, England. He obtained his B.Sc. in Honours Zoology in 1969, at the University of Western Ontario and his Ph.D. in Entomology in 1972, at North Carolina State University under the supervision of Dr. R.L. Rabb. In that year he won the Entomological Society of America's Entomological Research Institute outstanding graduate student award. Upon completing his Ph. D., Dr. McNeil accepted a position in the Département de biologie, Université Laval, where his first challenge was to learn French. By 1980, only eight years after his arrival, Laval had gained a reputation as one of the best centres of teaching and research in entomology in Canada, in large part by Dr. McNeil's efforts. Among others, Dr. McNeil teaches an outstanding undergraduate course in insect pest management, and in 1981, Dr. McNeil was invited to give it (in English for the first time) in the Entomology Department at Cornell University. Dr. McNeil became a full professor in 1982. Even though he has had up to 10 graduate students (he presently has 8 and has seen 11 M.Sc. and 6 Ph.D. students through to graduation), to them he is committed, involved and generous, both materially and with his time. Despite a very hectic schedule, he is always available for enthusiastic advice or consultation. His opinions and criticisms are invariably useful, thoughtful, and often seasoned with his own spontaneous sense of humour. He remains up-to-date with all of his students' research as well as their emotional state; the latter because he is a keen observer of human (as well as insect) behaviour.

Because of the small number of resource people in entomology at Laval, Dr. McNeil regularly brings in prominent entomologists from across the continent to give seminars, discuss current work with students, and, in some cases, to give short courses. This has frequently resulted in collaborative research efforts and student exchanges. Dr. McNeil attends many scientific meetings (frequently as an invited speaker) and always encourages and often subsidizes his students to attend. He will also go out of his way to introduce students to scientists and help them feel at home in the entomological community. In light of all of this, it is not surprising that Dr. McNeil was the Eastern Branch nominee last year for the Entomological Society of America's Distinguished Achievement Award in Teaching. Nor, is it surprising that several of his students have won major awards (three Entomological Society of America, three Entomological Society of Canada and three Société d'Entomologie du Québec graduate student awards in the past five years).

Much of Dr. McNeil's early research at Laval was directed towards the development of a pest management programme for the European skipper, *Thymelicus lineola*, an imported pest of hay fields in Quebec. He examined the efficacy of biological as well as chemical insecticides and the feasibility of using an endemic baculovirus for preventive control. With collaborators, he developed a temperature-driven algorithm which closely predicts the development of skipper larvae and can thus be used to time control measures. He also demonstrated the role of agricultural practices in the passive dispersal of this pest, and contributed substantially to knowledge of its basic biology and ecology. Dr. McNeil has made significant contributions to the study of the effects of pesticides on non-target organisms. He has also sustained a research effort in the response of insects to adverse conditions, particularly with respect to circadian rhythms, diapause, and migration.

Since 1978, Dr. McNeil has been interested in insect pheromones. With his students, he has investigated both male and female sex pheromones, trail-marking pheromones, and oviposition-detering pheromones working with four orders of insects. He has gained an international reputation in pheromone work by running one of the few centres integrating the ecology and chemistry of pheromone communication.



Dr. McNeil is best known, for his investigation of the pheromone communication system of the true armyworm *Pseudaletia unipuncta*. This work has, so far, been the basis for two Ph.D. theses, three current Ph.D. projects, and 14 publications. It is also part of his effort to determine the fate of the sporadic infestations of this insect in Canada (i.e., do Canadian populations of this moth return to the U.S. in the fall or must reinfestation occur because they cannot overwinter here?). This is an important Canadian entomological problem because so many of our insect pests come from the south in the spring. What is particularly remarkable about this study is its thoroughness and its multidisciplinary approach, including everything from insect hormones and histology to the coordination of pheromone trap-catch data collection across the continent. This work is destined, within a few years, to become a classical case study.

As further evidence of the quality of his research, in 1985, Dr. McNeil was invited to discuss the migration of the true armyworm at the Behavioral Ecology Symposium organized in conjunction with the annual meeting of the Florida Entomological Society. This annual symposium series, which carried on for seven consecutive years, was probably the most dynamic and stimulating forum for discussion of insect behavioural ecology in North America.

Dr. McNeil has a growing reputation as a quality scientist who is dedicated, critical, thorough, and does not pull punches. Because of this, he is in demand as a referee or reviewer for scientific journals and granting agencies, and as an external examiner for Ph.D. theses. He has served as an associate editor for the *Canadian Entomologist* since 1976 and his work has always been of the highest quality. He has also found time to be active in the *Société d'Entomologie du Québec* including a term as President, and has been active in other professional societies, particularly the Entomological Society of Canada (he is presently on the organizing committee for the 18th International Congress of Entomology, Vancouver, 1988).

The Entomological Society of Canada has previously recognized the contribution made to Canadian entomology by Dr. McNeil in bestowing on him the C. Gordon Hewitt award in 1979 and making him a Fellow of the Society in 1981. The Gold Medal award is usually awarded to an older entomologist rather than to a man in his early 40's. But because of the quantity and quality of his teaching and research, and the high standards that he is setting for Canadian entomologists, the Entomological Society of Canada is proud to award Dr. Jeremy Nichol McNeil the Gold Medal for Outstanding Achievement in Canadian Entomology for 1987.

PRÉSENTÉE À JEREMY N. McNEIL — MÉDAILLE D'OR, 1987

Le récipiendaire de la Médaille d'Or de la Société d'Entomologie du Canada pour contribution exceptionnelle à l'entomologie canadienne est le Dr. Jeremy Nichol McNeil du Département de Biologie de l'Université Laval à Québec. En lui présentant ce prix, la Société reconnaît l'importance de ses contributions à l'enseignement de l'entomologie au Canada, de ses études originales, de son travail innovateur sur l'aspect écologique de la communication phéromonale chez les insectes, et de son dévouement au service de la Société.

Jeremy N. McNeil est né à Tonbridge, Kent, Angleterre en 1944. Il a fait ses études primaires à Cornerbrook, Terre-Neuve, et secondaires au Collège de Lansing, Sussex, Angleterre. Il a obtenu son B.Sc. en Zoologie en 1969 de l'Université de Western Ontario et son Ph.D. en Entomologie en 1972 de North Carolina State University sous la direction du Dr. R.L. Rabb. La même année il recevait le prix de l'étudiant gradué par excellence décerné par l'Institut de Recherche Entomologique de l'Entomological Society of America. A la fin de son Ph.D., Dr. McNeil entra en fonction au Département de Biologie de l'Université Laval où son premier défi fut l'apprentissage de la langue française. En 1980, seulement 8 ans après l'arrivée du Dr. McNeil et en grande partie à cause des efforts de ce dernier, Laval était reconnu comme l'un des meilleurs centres pour l'enseignement et la recherche entomologique au Canada. Il enseigne plusieurs cours au ler cycle dont un cours remarquable sur la lutte dirigée contre les insectes nuisibles. En 1981, Dr. McNeil était d'ailleurs invité à le donner (en anglais pour la première fois) au Département d'Entomologie de l'Université Cornell. Dr. McNeil devint professeur titulaire en 1982. Bien qu'il ait eu à diriger simultanément jusqu'à 10 étudiants gradués (il en a présentement 8; 11 M.Sc. et 6 Ph.D. ont déjà complété leurs études sous sa direction jusqu'ici), il ne leur ménage ni son temps ni les moyens matériels dont il dispose. En dépit d'un horaire très chargé, il est toujours disponible pour consultation et prêt à fournir un avis enthousiaste. Ses opinions et ses critiques sont presque invariablement utiles, bien pensées, et souvent assaisonnées de son humour spontané. Il se tient au courant des progrès en recherche de tous ses étudiants ainsi que de leurs préoccupations personnelles ceci parce qu'il est un fin observateur du comportement humain autant que du comportement des insectes.

A cause du faible nombre de personnes ressources en entomologie à Laval, Dr. McNeil invite régulièrement des entomologistes de marque à donner des séminaires, à discuter leur travail avec les étudiants, et, dans certains cas, à présenter de courtes sessions de cours. Ceci a fréquemment eu pour conséquence des efforts de recherche coopératifs et des échanges d'étudiants. Dr. McNeil assiste à un grand nombre de conférences scientifiques (fréquemment comme conférencier invité) et encourage toujours ses étudiants, qu'il supporte souvent financièrement, à y assister. Il fait des efforts spéciaux pour présenter les étudiants aux chercheurs et les aide à se sentir chez eux au sein de la communauté entomologique. Il n'est donc pas surprenant que Dr. McNeil ait été le candidat de la Région est de l'Entomological Society of America pour l'America's Distinguished Achievement Award en enseignement. Il n'est pas surprenant non plus que plusieurs de ses étudiants aient gagné des prix importants. Au cours des cinq dernières années ils ont reçu plusieurs des prix décernés aux étudiants gradués: trois de l'Entomological Society of America, trois de la Société d'Entomologie du Canada et trois de la Société d'Entomologie du Québec.

Au début, la recherche du Dr. McNeil s'adressait surtout au développement d'un programme de lutte intégrée contre l'hespérie des graminées, *Thymelicus lineola*, un insecte nuisible introduit s'attaquant aux champs de foin au Québec. Il étudia l'efficacité des insecticides biologiques et chimiques ainsi que le potentiel d'un baculovirus endémique pour le contrôle préventif. A l'aide de collaborateurs, il a développé un algorithme qui prédit avec précision le développement des larves d'hespérie et peut ainsi être utilisé pour déterminer les dates idéales pour l'application des mesures de contrôle. Il a aussi démontré l'effet des pratiques agricoles sur la dispersion passive de cet insecte nuisible. Il a également ajouté considérablement à nos connaissances de la biologie fondamentale et de l'écologie de l'hespérie. Dr. McNeil a contribué de façon significative à l'étude des effets des pesticides sur les organismes non-visés. Il a aussi poursuivi des recherches sur la réponse des insectes aux conditions adverses, particulièrement en rapport avec les rythmes circadiens, la diapause et la migration.

Depuis 1978, Dr. McNeil s'intéresse aux phéromones des insectes. Avec ses étudiants il a étudié les phéromones sexuelles mâles et femelles, les phéromones de marquage, et les phéromones anti-ovipositionnelles de quatre ordres d'insectes. Il s'est mérité une réputation internationale dans le domaine des phéromones en dirigeant un des rares centres réalisant l'intégration de l'écologie et de la chimie de la communication phéromonale.

Dr. McNeil est surtout connu pour son étude du système de communication phéromonale de la légionnaire uniponctué, *Pseudaletia unipuncta*. Ce travail a été jusqu'ici la base de deux thèses de doctorat, de trois projets de doctorat en cours de réalisation et l'objet de 14 publications. Cela fait aussi partie de son effort visant à déterminer le sort des infestations sporadiques de cet insecte au Canada (c. à d., est-ce que les populations canadiennes de ce Lépidoptère retournent aux Etats-Unis à l'automne ou doit-il y avoir réinfestation parce qu'ils ne peuvent pas survivre l'hiver ici?). Il s'agit là d'un problème entomologique important parce qu'un grand nombre de nos insectes nuisibles nous vient du Sud au printemps. Cette étude est particulièrement remarquable à cause de son étendue et de son approche multidisciplinaire. Elle inclut à peu près tout, depuis les hormones des insectes et l'histologie jusqu'à la coordination du rassemblement des données de capture par pièges à phéromone à travers le continent. Ce travail est destiné, d'ici seulement quelques années, à devenir une étude classique.

La qualité du travail du Dr. McNeil est aussi confirmée par son invitation, en 1985, à discuter la migration de la légionnaire uniponctué au Symposium sur l'écologie comportementale organisé en conjonction avec la réunion annuelle de la Société d'Entomologie de Floride. Cette série annuelle qui dure depuis sept années consécutives constitue probablement le forum le plus dynamique et le plus stimulant pour la discussion de l'écologie comportementale des insectes en Amérique du Nord.

Dr. McNeil a une réputation grandissante de chercheur de haut calibre qui est passionné, critique, jamais superficiel et toujours consciencieux. C'est pourquoi il est en demande comme arbitre ou lecteur pour plusieurs journaux scientifiques et agences pourvoyeuses de fonds de recherche ainsi que comme examinateur externe de thèses doctorales. Il a servi comme éditeur associé du *Canadian Entomologist* depuis 1976 et son travail a toujours été de la plus haute qualité. Il a aussi trouvé le temps pour oeuvrer au sein de la Société Entomologie du Québec, dont un terme de Président, et il a été actif dans d'autres sociétés professionnelles, particulièrement la Société d'Entomologie du Canada (il est actuellement membre du Comité organisateur du 18ième Congrès International d'Entomologie qui doit se tenir à Vancouver en 1988).

La Société d'Entomologie du Canada a déjà reconnu la contribution du Dr. McNeil à l'entomologie canadienne en lui conférant le prix C. Gordon Hewitt en 1979 et en le faisant un Compagnon de la Société en 1981. La Médaille d'Or est habituellement décernée à un entomologiste en fin de carrière plutôt qu'à un scientifique dans la quarantaine. Cependant, à cause de l'abondance et de la qualité de son enseignement et de sa recherche et à cause des hauts standards qu'il a établi pour les entomologistes canadiens, la Société d'Entomologie du Canada est fière de décerner au Dr. Jeremy Nichol McNeil la Médaille d'Or pour 1987 en reconnaissance de sa contribution exceptionnelle à l'entomologie canadienne.

GOLD MEDAL ADDRESS

An Improved Period of Gestation: An Alternative to Academic Birth Control

Mr. President, colleagues, ladies and gentlemen; I would like to thank you all for honouring me as the 1987 recipient of the Gold Medal. I share this with many people and would like to acknowledge a few at this time. My scholastic endeavours as a seventeen-year-old were such that my biology teacher wrote "He still finds it very difficult to keep his head above water. He is very slow to understand the work." Despite such stellar performances (this was my best subject!) my parents continued to provide both moral and financial support, on the premise that everyone at least deserves a chance to try. I thank them for having faith. I owe thanks to Dr. Robert L. Rabb, not only for accepting me as a graduate student (by this time my academic performance had improved slightly) but also for his encouragement and friendship throughout the years. Finally, I would like to thank my graduate students, both past and present, for they are a very fine group of scientists and I feel privileged to be associated with them. I am indebted to them for they have undoubtedly contributed more to my scientific education than I have to theirs.

I would like to spend the remaining time allotted to me today addressing the question of graduate training in Entomology. In a recent forum article in the Bulletin of the Entomological Society of America (Vol. 33(1): 4-6; 1987) R.H. Miller noted that, while the number of positions available for graduates is on the decline. He felt that the current situation necessitated some form of academic birth control with Universities (i) finding "alternate sources of cheap labor" and (ii) "inhibiting academic advisors from gaining disproportionate research credit and promotion potential from student research." This, he suggested, might "sufficiently slow the student grist mills to equilibrate supply with demand." While I truly sympathize with the frustrations of recent graduates looking for a permanent position in today's market and regrettably recognize that the scientific career of certain faculty members is entirely dependent on the research efforts of graduate students working 'under their direction,' I believe Dr. Miller forgot one fundamental point in the development of his case. Students freely choose to undertake graduate studies and are not recruited by 'academic pressgangs.'

I wholeheartedly support any measures that would favour the highly desirable symbiotic student-professor relationship and that would eliminate the exploitation of students by disinterested, self-serving senior advisors. However, I do not believe that we, professors or administrators, have the right to refuse qualified students on the grounds of limited employment possibilities if, even when honestly informed about future job market predictions, they still express the desire to undertake graduate studies in entomology. Furthermore, if the number of graduate positions was limited, what criteria would be used for selection? Grades would undoubtedly be of utmost importance, a parameter that in my experience as a professor is often a poor predictor of a student's research capacity. Therefore, I would have to say no to "birth control" relative to admissions. This does not, however, mean that I think we should remain with the status quo. We undoubtedly have a responsibility to provide a training to graduate students during their 'gestation period' that will best prepare them for the job market.

Under present day conditions it is a 'buyers' market,' and I think the announcements for permanent or post doctoral positions reflect this. To make my point I have chosen two examples that have recently crossed my desk, ones which some students in my laboratory could have or did apply for. There is the all encompassing *Candidate in Animal Ecology to teach and do research in their field of expertise or the Desired skills include modelling, statistics, SEM, insect and fungal culturing, techniques of behavioral, insecticidal and pheromone research, taxonomy of muscoid Diptera and associated parasites and predators*. An entomologist applying for the first job would be in competition with candidates from a wide array of biological disciplines, while in the second they would be competing with scientists from various fields in entomology. In both cases it is evident that an individual with a broader entomological research training will have an advantage over someone who has a more restricted one. This is no great surprise, but I am not convinced that either the students or their advisors give this as much thought as it deserves. The student must take this into consideration when choosing the Institution where they study, once they have decided that entomology really is the career they wish to follow. I also think that professors, once they have agreed to accept students, have a responsibility to provide such opportunities for diversification. I am a firm believer in interdisciplinary research which not only permits collaborators to address questions that they could not individually, but also provides the framework within which graduate students may acquire a diversity of skills. I will use the work on the true armyworm

carried out at Laval, not necessarily because it is the best example but because it is the one that I know best.

This study was initially started to look at the calling behaviour of females and the receptivity of males to the female sex pheromone under a range of ecological conditions, so that we might better interpret trap catch data. This project now includes studies on hormonal control of pheromone production, hormonal control of lipid utilisation as it relates to flight, neurophysiological aspects of pheromone reception, identification and quantification of male and female pheromone components, flight energetics and modelling of season movement, in addition to the original behavioural and ecological components. It is evident that these projects require skills that exceed my expertise, but I am fortunate in having excellent collaborators in different laboratories throughout North America. As a result, students working on *P. unipuncta* have the opportunity to acquire experience in several areas other than behavioural ecology. This, I believe, not only increases their 'fitness' in the current job market, but will also encourage them to become involved in interdisciplinary research projects once they are gainfully employed. I recognize that finding collaborators is not always easy and that such research may result in additional costs. However, I would most strongly urge my colleagues to strive towards this goal as the scientific and educational benefits are so great.

A recent, far-sighted initiative of the Fonds FCAR, a provincial granting agency in Quebec, has been established to favour student exchange. Ph.D. students in Quebec Universities, that hold FCAR graduate scholarships, may now apply for funds to cover part of the expenses of a three- to twelve month stay at institutes outside Quebec. I think the Entomological Society of Canada could make a similar positive contribution to the diversification of entomological graduate training in Canada. The Society presently provides two scholarships each year to students just starting their graduate career and I would like to recommend that in the future the Society provide two additional student awards. These would be available for young scientists, already well into their graduate programme, that wish to carry out research or take courses at another institute. Applications for the awards could be in the form of a grant proposal where each applicant must demonstrate the originality of the proposed research and explain how the exchange would provide experience that could not be obtained at their own University. These would be examined by an expert committee and a constructive criticism of their application be returned to each student. In this way it would be a positive learning experience, with all students gaining experience in the preparation of grants, even if they were not chosen for one of the awards.

In closing I would like to quote a previous Gold Medal recipient, Dr. George Ball (Bull. Ent. Soc. Can. 12(4) 68-71; 1980), who clearly expressed the sentiments I feel at this moment. "Thank you for honoring me as you have today. I think the award is unwarranted, but I appreciate it deeply, and it will inspire me to attempt to earn it by future work."

ALLOCUTION

Periode de Gestation Amelioree: Une Alternative au Controle des Naissances Academique

M. le Président, collègues, mesdames et messieurs, j'aimerais tous vous remercier de l'honneur que vous m'avez fait en me nommant récipiendaire de la médaille d'or 1987. Cet honneur, je le partage avec plusieurs personnes et j'aimerais profiter de cette occasion pour les remercier. Mes efforts scolaires à l'âge de dix-sept ans étaient tels que mon professeur de biologie écrivait dans mon rapport "Il a beaucoup de difficulté à garder sa tête hors de l'eau. Il assimile la matière avec beaucoup de lenteur." En dépit de ces maigres exploits (ceci était ma meilleure note) mes parents m'ont toujours supporté moralement et financièrement, prenant pour acquis que chacun doit avoir au moins une chance. Je les remercie d'avoir eu confiance en moi. Je dois aussi adresser mes remerciements au Dr. Robert L. Rabb, pour m'avoir non seulement accepté comme étudiant gradué (à l'époque mes résultats scolaires s'étaient légèrement améliorés) mais aussi pour m'avoir encouragé et manifesté son amitié tout au long de ma carrière. Finalement, j'aimerais remercier tous mes anciens et nouveaux étudiants gradués, un groupe d'excellents chercheurs auquel j'ai le privilège d'être associé. J'ai une certaine dette envers eux car ils ont incontestablement contribué davantage à mon éducation scientifique que j'ai contribué à la leur.

J'aimerais consacré le temps qu'il me reste pour discuter de la question de la formation des étudiants gradués en entomologie. Dans un récent article du Bulletin de la Société entomologique des Etats Unis (Vol. 33 (1): 4-6; 1987) R.H. Miller faisait remarquer qu'en dépit du nombre relativement stable de bourses accordées aux étudiants gradués le nombre d'emplois offerts était en diminution. Face à une telle situation, il suggère qu'une certaine forme de contrôle des naissances académique soit exercée incitant ainsi les universités (i) à trouver d'autres sources de main d'oeuvre à bon marché que celle des étudiants gradués et (ii) d'empêcher que des superviseurs de thèses bénéficient de crédits de recherche disproportionnés et d'un potentiel d'avancement à partir de la recherche de leurs étudiants. Il croit que ceci pourrait suffisamment ralentir la production d'étudiants et maintenir ainsi un bon équilibre entre l'offre et la demande. Bien que j'aie beaucoup de sympathies pour toutes les frustrations que ressentent les étudiants gradués présentement à la recherche d'un emploi permanent, et que je reconnaisse avec regret, que le succès de la carrière scientifique de certains professeurs est dû uniquement aux efforts de recherche des étudiants travaillant 'sous leur direction,' je crois que le Dr. Miller a oublié un point fondamental dans son propos. Ce sont les étudiants qui, en toute liberté, décident d'entreprendre des études graduées et en aucun cas, ces derniers sont recrutés de force par les superviseurs ou les administrateurs.

J'appuie entièrement toutes mesures qui viseraient à assurer une relation saine et étroite entre les professeurs et les étudiants et qui, du même coup, élimineraient les possibilités d'exploitation des étudiants par des superviseurs impartiaux. Cependant, je ne crois pas que nous, professeurs ou administrateurs, ayions le droit de refuser des étudiants qualifiés sous prétexte que les possibilités d'emploi sont limitées, en particulier lorsqu'après avoir honnêtement informé les étudiants de l'avenir du marché du travail, ils désirent malgré tout poursuivre des études graduées en entomologie. De plus, si nous devons limiter le nombre de postes d'étudiants, quels critères utiliserions-nous pour les sélectionner? Les notes académiques seraient certainement le critère premier. Cependant, si j'en juge par mon expérience en tant que professeur, le dossier académique ne nous renseigne guère sur la capacité de recherche d'un étudiant. En conséquence, je dirais non au contrôle des naissances académique pour ce qui a trait à l'admission des étudiants gradués. Ceci ne veut pas dire que je crois que nous devrions garder le status quo. Nous avons indubitablement la responsabilité de donner une formation aux étudiants gradués pendant leur période de gestation et ce, afin de bien les préparer au marché du travail.

De nos jours, il existe de toute évidence, un 'buyers market' et je crois que la façon dont sont décrites les offres d'emploi ou les positions post-doctorales reflète un peu ceci. Pour être plus clair, j'ai choisi de vous présenter deux exemples d'offres d'emploi qui ont abouti récemment sur mon bureau, et auxquels certains de mes étudiants pouvaient (ou ont) appliqué. Dans l'une d'elle, on décrivait vaguement une position pour un *Candidat en Ecologie animale pouvant enseigner et faire de la recherche dans leur domaine de compétence* alors que dans l'autre il était indiqué que *l'attention serait accordée aux personnes possédant des connaissances en modélisation, statistiques, MEB, cultures d'insectes et de champignons, techniques associées aux études de comportement, des insecticides et des phéromones, taxonomie des Diptères muscoïdes ainsi que des*

parasites et des prédateurs associés. Un entomologiste appliquant pour le premier type d'emploi serait en compétition avec des candidats formés dans diverses disciplines biologiques alors que dans le second, il aurait à compétitionner avec des scientifiques possédant des formations diverses en entomologie. Dans un cas comme dans l'autre, il est bien certain qu'un individu ayant une formation diversifiée en entomologie serait avantagé par rapport à un collègue ayant une formation plus restreinte. Ceci n'est pas très surprenant. Cependant, je ne suis pas si convaincu que les étudiants gradués et superviseurs aient accordé à ce sujet l'attention qu'il mérite. Les étudiants doivent en tenir compte lorsqu'ils choisissent l'endroit où ils vont étudier en entomologie. Je pense aussi que les professeurs qui acceptent des étudiants gradués doivent faire leur possible pour offrir cette formation diversifiée. Je crois beaucoup en la recherche interdisciplinaire parce qu'elle permet aux collaborateurs d'examiner certains aspects que seuls ils ne pourraient faire. De plus, ce type de recherche peut permettre aux étudiants d'obtenir diverses compétences. Pour bien illustrer mon point de vue, je vais utiliser le travail réalisé à l'Université Laval sur la légionnaire uniponctué et ce, non pas parce qu'il est le meilleur exemple, mais parce c'est celui que je connais le mieux.

Le projet sur la légionnaire a débuté avec l'étude du comportement d'appel des femelles et de la réceptivité des mâles à la phéromone sexuelle sous différentes conditions écologiques dans le but de permettre une meilleure interprétation des captures dans les pièges à phéromone. Ce projet comporte maintenant des études sur le contrôle hormonal (i) de la production de phéromone chez la femelle et (ii) de l'utilisation des lipides dans l'exercice du vol, l'étude des aspects neurophysiologiques liés à la réceptivité des phéromones des mâles et des femelles, l'identification et la quantification des différentes composantes de ces mêmes phéromones, l'étude de l'énergétique du vol et la modélisation des déplacements saisonniers des adultes. Il est bien certain que ces projets requièrent des compétences qui excèdent les miennes, cependant je suis chanceux d'avoir d'excellents collaborateurs qui oeuvrent dans divers laboratoires à travers toute l'Amérique du Nord. Grâce à cette collaboration, les étudiants travaillant sur *Pseudaletia unipuncta* ont la chance d'acquérir l'expérience dans plusieurs autres disciplines que celle de l'écologie comportementale. Je crois que ceci augmente non seulement leur "fitness" sur le marché du travail, mais aussi les encourage à s'impliquer dans des projets de recherche interdisciplinaire, une fois engagé dans une position permanente. Je dois reconnaître qu'il est parfois difficile de trouver des collaborateurs, et que ceci peut aussi occasionner certains frais additionnels. Cependant, j'inciterais fortement mes collègues à tenter cette expérience que j'estime enrichissante tant sur le plan scientifique qu'éducatif.

Récemment, une agence de bourse gouvernementale du Québec, le Fond FCAR, a mis sur pied un programme qui favorise les échanges d'étudiants. Ainsi, dans toutes les universités du Québec, les étudiants du niveau doctoral, qui détiennent déjà une bourse du FCAR, peuvent appliquer à ces nouveaux programmes de bourses qui offrent la possibilité d'effectuer des stages de formation d'une durée de trois à douze mois dans différents instituts de recherche à l'extérieur du Québec. Je pense que la Société entomologique du Canada pourrait aussi faire une contribution positive pour la formation multidisciplinaire des étudiants gradués. Présentement, la Société offre, chaque année, deux bourses aux étudiants qui débutent leurs études graduées. J'aimerais profiter de l'occasion qui m'est offerte aujourd'hui pour proposer à la Société d'offrir, à chaque année, deux autres bourses de mérite aux étudiants gradués. Ces bourses permettraient aux jeunes scientifiques, déjà bien engagés dans leur programme de recherche, de parfaire une partie de leurs travaux de recherche ou encore de suivre des cours dans un institut autre que le leur. L'application à ces programmes de bourses pourraient être faite suivant la formule utilisée présentement pour les demandes d'octroi. Le candidat devrait dans cette demande démontrer l'originalité de sa recherche et justifier comment l'échange qu'il envisage pourrait l'enrichir d'une expérience qui ne peut être offerte par l'université qu'il fréquente. Ces demandes pourraient être examinées par un comité d'experts chargé de fournir à chaque étudiant une évaluation constructive de leur demande d'application. De cette manière, les étudiants pourraient apprendre comment rédiger une demande d'octroi, et ce, même s'ils ne sont pas pour autant bénéficiaires de l'une de ces bourses.

En terminant, j'aimerais reprendre les propos tenus jadis par un autre bénéficiaire de la Médaille d'Or, le Dr. George Ball (Bull. Ent. Soc. Can. 12(4) 68-71; 1980) parce qu'ils expriment bien les sentiments que j'éprouve à l'instant. "Thank you for honoring me as you have today, I think the award is unwarranted, but I appreciate it deeply, and it will inspire me to attempt to earn it by future work."

CRIDDLE AWARD

DR. WALTER LAZORKO

Dr. Walter Lazorko has been awarded the 1987 Criddle Award by the Entomological Society of Canada for major contributions to entomology by an amateur in British Columbia.

Walter is a retired medical doctor who came to Canada following World War II. He studied insects from an early age in his native Ukraine and built a large collection (roughly 500,000 beetles) before emigrating. His dedication to entomology is illustrated by the extraordinary measures he took to smuggle his collection through eastern Europe to Austria during hostilities.

He joined the Entomological Society of B.C. shortly after his arrival and is now one of its longest standing members. He has written a number of notes for the Society's Proceedings, Journal, and newsletter, mainly on the systematics and distribution of British Columbia beetles. While in British Columbia he has collected about 200,000 beetles. His interest in the U.B.C. Spencer Entomological Museum collection has been especially valuable; his donations and expert identifications have greatly improved the quality of the museum's beetle holdings.

Because of age and ill health, Walter's active entomological collecting has virtually ceased. Nevertheless, he continues to work on his collection at home in Vancouver. Therefore, the Society takes great pleasure in honouring him for his important contributions to B.C. entomology.

1987 POSTGRADUATE AWARD WINNERS

The 1987 winners of the Entomological Society of Canada postgraduate awards were Mr. David Jon Bergvinson and Mr. Edward B. McLean.

Mr. Bergvinson, from Aldergrove, B.C., obtained his Bachelor's degree from Simon Fraser University majoring in biochemistry and minoring in biology. He is currently studying for a Master of Pest Management under Dr. J.H. Borden at Simon Fraser University. His research involves a study of factors that promote successful infestations of the mountain pine beetle.

Mr. McLean is from Rothesay, New Brunswick and obtained a B.Sc. (Honors) in Biology from Mount Allison University. He recently began studying for his Masters at Erindale College, University of Toronto under Dr. J.H. Fullard. His thesis project involves the neuroethological basis of bat/moth predator-prey interactions.

ANNUAL REPORTS FROM OFFICERS, TRUSTEES AND COMMITTEES (1987)

Report of the Secretary

During the past year I have recorded minutes of the meetings of the Governing Board and Executive Council, prepared the Agenda for these meetings, and sent out notices of meetings, as required, to the Executive, Directors and Trustees of the Society. I have maintained the files of the election results and distributed minutes, reports, scholarship forms, and other information as requested; prepared notices of meetings and of Society affairs for the Bulletin; provided liaison between committees of the Society and Governing Board, and between the Society and Affiliate Societies. Much of the time spent on Society business involved taking care of correspondence and day-to-day affairs of the Society.

J. A. Shemanchuk

Report of the Treasurer

1. NSERC Publication Grant

This year is the last year of the current 3-year grant. An application will be submitted in early November for the next 3-year grant. Our continued good financial position depends heavily on this grant.

2. *Financial Report*

In 1986 the Society closed the year with a \$61,000 "profit" or \$18,500 profit if investment income is not considered. I estimate that a similar balance will be shown for 1987. Therefore, any increases in dues or page charges are probably not immediately needed. However, if the NSERC grant is not approved, then increases in income may need to be considered.

3. *Sales of books, Memoirs etc.*

Memoir sales continue to be slow for most numbers. This is a reflection of their limited readership and should not be a cause of concern.

Sales of Arctic Arthropods has been very slow, but orders are continuing to come in. I'm still not convinced that this book is widely known even though we have advertised the book as widely as possible.

The Society advanced a portion of the publication costs of *Insect Dormancy* by Hugh Danks of the Biological Survey. The profits from the sale of the book went to the Society until the advance was paid off. Sales have been quite brisk and the advance has been fully discharged; profits now go directly to the Biological Survey.

4. *Miscellaneous*

The computer equipment in the office has been updated by the purchase of a MacPlus computer, printer and software for compiling a membership list and for general accounting. The previous equipment was sold in early January.

The very large stock of back issues of *Canadian Entomologist* and the *Memoirs* was moved into a fire-safe warehouse and was reorganized to provide easier access.

The investment portfolio of the Society was reorganized into a "Full-Service" program. The investment company, John Graham and Co. Ltd., now handles all aspects of interest collection, purchases, monitoring of accounts and investment advice. All investment monies of the Society are in "liquid accounts" and can be withdrawn instantly. All investments are in government or provincial bonds or in companies such as Ontario Hydro.

D.E. Bright
Treasurer

Finance Committee

Members of the Finance Committee (FC) are: D. Barnes (now retired), V.M. Behan-Pelletier, D.E. Bright, H.V. Danks, A.C. Schmidt, I.M. Smith, H.J. Teskey (now retired).

The Committee met in Ottawa on February 19 and September 2, 1987. The following recommendations were presented to the Executive and Governing Board.

1. The FC recommended that the Memoir series be modified by taking the following set of actions.
 - (a) All scientifically acceptable manuscripts submitted should be published without delay; and at the same time
 - (b) The actual costs of printing and editing each memoir should be charged to authors,
 - (c) Printing costs should be reduced by emphasizing the use of camera-ready copy, and
 - (d) Subscriptions (to institutions but not individuals) should be increased: to \$150 (Canada), \$155 (US), \$160 (overseas); but
 - (e) Page charges should not be changed at present.
2. The FC recommended that guidelines be established by the Society for the operating expenses of the Scientific Editor, to ensure that paid services are controlled by proper contractual arrangements made by the Board, with appropriate limits and accountability, and that possible local assistance by the employer is fully assessed.
3. The FC recommended that allowable expenses for the Governing Board members attending the long and expensive International Congress of Entomology (1988) be limited.
4. The FC concluded that one annual visit to Headquarters requested by the Scientific Editor was probably appropriate, if it took place at the same time as the meeting of the Executive Council.
5. The FC recommended that no photocopier be acquired for the ESC office.
6. The FC reviewed the 1988 Budget and recommended it for acceptance. The FC recommended action to increase the number of student and sustaining members, to control Scientific Editor's costs, and to evaluate the cost-benefit of the Society's Science Policy

Committee. The FC concluded that the ESC's finances are sound, but efforts to limit operational costs should continue so that the Society can underwrite its valuable general activities serving entomology, such as congresses, briefs and contracts.

H.V. Danks
Chairman

By-laws, Rules and Regulations Committee

The By-laws, Rules and Regulations Committee considered three matters referred to it by the Governing Board after the Board Meetings held in October, 1986.

1. Guidelines for the Student Paper Competition

The Board asked the Committee (item 8.14, Meeting of October 4-5, 1986) to examine guidelines that the Board had prepared for the Student Paper Competition.

First, the Board should strike a new Continuing Committee (the Student Paper Competition Committee) to which the proposed guidelines would apply. The Board should also determine other details of the Committee, such as composition, appointment, terms of office, objectives, duties and rules.

The By-Laws, Rules and Regulations Committee has the following comments about the four guidelines proposed by the Board:

Guideline #1: Change to: The Student must be enrolled in a graduate degree program or have graduated from the program less than six months previously.

Guideline #2: No change.

Guideline #3: The Committee feels that the student should not be required to be sole author, for Granting Agencies may question the absence of the Supervisor's name. It would be preferable to use both names and to require that the Supervisor provide a letter verifying that the Student has made a substantial contribution to the research.
Therefore, we suggest: The Supervisor's name may appear as co-author of the paper. The Supervisor shall provide written verification that the Student has made a substantial contribution to planning the research, and to analyzing and evaluating the results.

Guideline #4: No change.

Add: Guideline #5: The Student shall prepare and present the paper.

The Board should decide whether the guidelines of ESC or those of an Affiliate will be used at a joint meeting of ESC and the Affiliate.

2. Fellowship Quota

The Board moved (item 9.2.16.3 of the Meeting of October 4-5, 1986) that Standing Rule I, 2(a) be changed to read:

"The number of Active Members who are Fellows shall not exceed ten percent (10%) of the Active Membership except in the event of a drop in Active Membership, when the percentage may temporarily be exceeded."

The By-Laws, Rules and Regulations Committee has no comments about this motion, and no action by the Committee is required.

3. Student Involvement on the Governing Board

The Board asked the Committee to report on the feasibility of having students serve on the Governing Board (item 6.3, Meeting of October 8, 1986).

There appears to be no legal obstacle in the By-laws or Standing Rules to having Student Members serve on the Governing Board. Students, like other Members, can be nominated for

Governing Board positions. The Committee feels that all nominations should be on the basis of perceived ability to carry out the duties of the position. There should not be a special "student category" on the Board; in our opinion, the Board could equally recognize other special groups which currently receive no special recognition. Apart from this basic principle, the logistical problems with having a student category are important; for example, it is not clear how a student on the Board could effectively represent the interests of all student members of the Society. An additional problem would arise when a student member of the Board completed his/her University Training during the three-year term on the Board, and accepted full-time employment. In this situation, he/she would cease to be a Student Member, and presumably would be ineligible to continue as a Student Representative on the Board.

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

Fellowship Committee

No candidates for Fellowship in the Society were nominated in 1987.

One of the duties of the Fellowship Committee is to ensure that the number of Fellows, excluding those who are emeritus and honorary members, does not exceed ten percent of the active membership except in the event of a decrease in the number of active members, when this percentage may be exceeded temporarily.

At the time of the 1986 Annual Meeting we had ten percent of our active members as Fellows, and neither the members of this Committee nor of the Society were permitted to nominate candidates for Fellowship unless and until there was an appropriate increase in membership. Consequently, I did not ask the Bulletin Editor to publish a notice in the December 1986 issue soliciting nominees as candidates for Fellowship in 1987. Members of the Committee were informed of the restrictions.

S.R. Loschiavo
Chairman

Publications Committee

The Publications Committee continued with the general review of procedures and guidelines. The Committee worked closely with the Scientific Editor and, in addition, considered the submissions of members.

The INSTRUCTIONS TO AUTHORS were completely revised and brought up-to-date with current printing standards. An English and a French version of the new instructions appeared in The Canadian Entomologist [119(7/8): i-iv; 1987].

It was recommended that the Society continue to publish in its journals symposium and conference contributions. In order to ensure that such contributions are published with minimum delay, the Scientific Editor prepared a set of informal guidelines setting out procedures for the review and handling of manuscripts.

Guidelines for the C. P. ALEXANDER REVIEWS were published in the Bulletin of the Entomological Society of Canada [18(4): 139-140; 1986]. On the recommendation of the Scientific Editor, the Committee extended three invitations for reviews.

There were several changes among ASSOCIATE EDITORS. I.M. Smith and R.E. Skinner resigned as Associate Editors to accept other duties. V. Behan-Pelletier has been appointed to replace I.M. Smith, with term of office to 31 December 1989. A replacement for R. Skinner is currently being approached.

The Committee dealt formally with one appeal against a decision by the Scientific Editor.

M. Mackauer (Chairman)
G.C.D. Griffiths
D. Lafontaine
A. Maire
D.R. Oliver
A.J. Thomson
W.J. Turnock

Scientific Editor

From Aug. 1, 1986 to July 31, 1987, services and supplies for the editorial office in Saskatoon cost the Society approximately \$7650. (\$637. per month), down about 10% from the cost per month in 1985-86 (\$700.).

Since my last report, two Associate Editors have resigned. Dr. Ian Smith felt that he had just too much to do; he has been replaced by Dr. V. Behan-Pelletier. Dr. Ron Stinner resigned to accept appointment as co-editor of Environmental Entomology; a replacement has been recommended to the Publications Committee.

Two scientists have been invited to submit manuscripts under sponsorship of the C.P. Alexander fund. Both manuscripts should be published in 1988. New "Instructions to Authors" were printed in the July-August issue of Can. Ent. and will be reprinted in the January issue in subsequent years. Information on the front and back covers of the journal now are printed in both official languages.

Manuscripts

In the 52-week period (Aug. 15, 1986 to Aug. 15, 1987) 166 manuscripts (3.2 per week) were received. The disposition of these was:

In review	26
To author for revision (A)	36
Combined with another	0
Withdrawn (B)	3
Accepted (C)	70
Rejected (D)	31
Rejection Rate: $\frac{(D+B)}{A+B+C+D}$	= 24.3%

For the 140 manuscripts that have been through review during the past 52 weeks, time in review was (no. of manuscripts in parentheses): 0-2 weeks (7); 3-4 weeks (14); 5-6 weeks (23); 7-8 weeks (35); 9-10 weeks (33); 11-12 weeks (15); 13-14 weeks (9); more than 14 weeks (4).

The total number of pages published during calendar 1987 (estimated for Can. Ent., 1200 pages; estimated for Memoirs, 1000 pages) will be about the same as for 1986 (2201 pages). The overall total in 1987 should be the third or fourth highest in recent years.

As before, my sincere thanks are extended to all those scientists who serve or have served as Associate Editors. Special thanks go to my Assistant Editors, Mukul Mukerji and Harvey Craig. Without the good efforts of all these people, the editorial process simply would not work. Sincere thanks, too, go to the many scientists who have served us so well as reviewers. And last, but far from least, my thanks to Barbara Patterson who continues to do her job as Managing Editor very well.

I thank you for the privilege of serving the Society for another year. I am willing to continue, as are the Assistant Editors, but you have our offer to resign if you wish to appoint other people.

Al B. Ewen, Scientific Editor

Bulletin Editor

This year my main efforts were directed at 1) reducing costs of publication of the Bulletin, and 2) improving the punctuality of delivery.

Costs of publication were reduced by printing the Bulletin in a slightly smaller format. Projected savings were 10%.

The delays in the Bulletin reaching the members have been of great concern to me. I have spent some time in trying to determine the source of the delay. As far as I can ascertain the main delay is in mailing from the Society office in Ottawa. The details of production time for the Bulletin are detailed in a separate report.

An account set up on January 6, 1987 of \$300 for miscellaneous Editor's expenses (i.e. courier services) has \$232 left (as of 15 September 1987).

R. Aiken,
Bulletin Editor

Membership Committee

1. *Honorary Membership*

Two nominations were received for honorary membership. The membership committee approved the two nominations and they were forwarded for inclusion in the ballot. Biographical information has been prepared on the nominees for publication in the Bulletin and other news media on the occasion of the award of honorary membership.

The number of honorary members currently allowed is ten. Currently (excluding the two nominees) there are seven living honorary members. Therefore, if the two nominees are approved by the membership, one vacancy will remain.

2. *Publication of Membership List*

A new membership list is being compiled and will be distributed to all members.

3. *Membership*

The precipitous decline in membership that was experienced between 1985 and 1986 has slowed considerably but the trend is still downwards. Regular membership declined by 5% to 659, and student membership by 5% to 115. There was an increase in emeritus members of 22% to 60. Total membership is 834 plus three sustaining members.

4. *Survey of 'Lapsed' Members*

Because of the large number of members who did not renew their membership in 1986, the membership committee was asked by the Board to survey the membership to determine whether inadequacies of the Society were to blame for the substantial drop in membership. That survey is now complete, and the report has been submitted for the Board's consideration.

5. *Recruitment*

In addition to the loss of previous members, the Society may be suffering a membership decline because of reduced recruitment. In an effort to increase recruitment, the membership committee has designed a simplified form for new members. If approved by the Board, this will appear in the December ESC Bulletin with an accompanying notice urging the recruitment of new members. Supplies of the form will also be sent to the Heads of Canadian University Departments of Entomology, and to the affiliated society representatives on the membership committee.

N.J. Holliday (Chairperson)
B. Roitberg
J. Spence (proxy D. Craig)
P.G. Mason
T.D. Galloway
D.J. Madder
H.B. Specht

Elections Committee

The committee was comprised of A. Ron Forbes, Syd G. Cannings (substituting for Rob A. Cannings), and Murray B. Isman (Chairman). We met on August 7, 1987 at the Agriculture Canada Research Station in Vancouver and examined ballots for the 1987 election of officers.

A total of 309 ballots were cast. The successful candidates were:

Second Vice-President: J.N. McNeil
Directors-at-large: N. Angerilli, G. Gerber
Fellowship Committee: P. Harris, J.S. Kelleher

The Elections Committee hereby attests that all of the ballots were accurately counted and that the results are correct.

Murray B. Isman,
Committee Chairman

**ENTOMOLOGICAL SOCIETY OF CANADA
LA SOCIÉTÉ D'ENTOMOLOGIE DU CANADA**
1322 Carling Avenue, Ottawa, Canada K1Z 7K9

**Application for membership — (new members only)
Demande d'adhésion (nouveaux membres seulement)**

Name and Address (please print)
Nom et Adresse (lettres moulées)

() - _____

telephone (bus.) téléphone

Key words describing interests (up to six)

() - _____

telephone (home) téléphone

MEMBERSHIP DUES (includes the **Canadian Entomologist** and **Bulletin**)
COTISATION (incluant l'abonnement au **Canadian Entomologist** et au **Bulletin**)

Regular member \$45.00
Membre actif

Student member (ask your professor to endorse form) \$20.00
Membre étudiant (demandez l'appui de votre professeur)

Endorsement _____
Signature du professeur

MEMOIRS (including 30% discount for members) \$24.50
MÉMOIRES (incluant l'escompte de 30% pour les membres)

If you need an official receipt please check

Si vous désirez un reçu officiel, indiquez, s'il vous plaît

Enclose cheque or money order payable at par, Ottawa, Canada
Inclure un chèque ou mandat payable au pair, Ottawa, Canada

Scientific Committee of the Biological Survey of Canada (Terrestrial Arthropods)

Full sets of Minutes of meetings of October 23 and 24, 1986, and of April 23 and 24, 1987 were submitted to the Society through its Secretary. Meetings were well attended by members and by invited representatives of biological societies and federal agencies with interests overlapping those of the Survey. Items discussed included organization of a workshop on pest insects in relation to climatic change, development of Survey modules additional to and modelled after the one on Terrestrial Arthropods, continued development of an insect collection in the National Museum of Natural Sciences, workshops on major insect taxa, and problems involved in use and development of National Parks as sites for long-term ecological studies. The focus of these discussions was cooperation and facilitation by the Biological Survey.

Reports were received about the 10 scientific projects that are currently scientific priority items for the Biological Survey. In that context, a publication with keys to the families of myriapods is nearing completion, and some manuscripts for the Yukon and Queen Charlotte Islands projects have been submitted. Also, a bibliography for entomological aspects of springs is in an advanced state of preparation.

The Biological Survey, in preparation for the XVIIIth International Congress of Entomology, has undertaken presentation of a booklet about the insect fauna and systematic entomology in Canada. The text, by Hugh Danks, is in an advanced stage of preparation.

The Biological Survey Committee prepared for consideration by the Governing Board a set of guidelines concerning editorial procedures for publication of Society-sponsored symposia.

The most important item to emerge from the activities of the Biological Survey was the publication in February of "Insect Dormancy: an Ecological Perspective," by Survey Director Hugh V. Danks. Sales have already been sufficient to recover publication costs.

George E. Ball
Chairman

Insect Losses Committee (Part II)

The final draft of the report, "The Economics of Insect Control on Wheat, Corn, and Canola in Canada, 1980-1985," was completed and submitted to Agriculture Canada in January 1987. The Scientific Authority for the Government has accepted the report. This report completes this insect losses study. A short version of the report will be published in the Bulletin. Copies of the complete report have been deposited in the following libraries of Agriculture Canada: 1. Sir John Carling Building, Ottawa, 2. Research Station, Winnipeg, 3. Research Station, Saskatoon, and 4. Research Station, Lethbridge.

George H. Gerber
Chairman

Science Policy Committee

The committee met on 27 April 1987 (just after the Executive Committee meeting).

O. Morris reported on the biological control meetings, sponsored by Agriculture Canada and held immediately after the ESC 1986 meeting in Winnipeg. He reported that the meeting was successful.

J. Shorthouse expressed concern about the problem government entomologists (mostly in Agriculture) have in attending meetings, especially the Congress in Vancouver.

It was suggested that the 1970 Policy on Pesticides in the Environment be updated.

Edward C. Becker
Chairman

Joint Annual Meeting Committee

The 37th Annual Meeting was held at the Delta Lakeside Hotel in Penticton, B.C. on September 28-30, 1987. Approximately 250 people registered for the meeting which was held jointly with the Entomological Societies of B.C. and Washington State. Eight speakers participated in the feature symposium which explored the topic "Arthropod Pheromones — From the Lab Bench to the Field" and just over 80 submitted papers were heard during the 3 days of scientific sessions. Further opportunities for both social and scientific communication occurred during an opening reception at the Art Gallery of the South Okanagan and a banquet held at the hotel. A field trip to the Arid Ecological Reserve and a tour of local wineries were very heavily subscribed to.

The committee is very grateful in the generous financial support provided by NSERC and various corporations.

Nello Angerilli
General Chairperson

Heritage Committee

The archival holdings of the Entomological Society of Canada within the Public Archives of Canada, were substantially increased in 1987. Society papers, documents, and reports that were submitted included five boxes of material containing the following:

1. Letters Patent and Documents of Incorporation, 1956.
2. Minutes and Reports of Interim, Governing Board, and Annual Meetings for the years 1951-1976.
3. Correspondence re: Organization of Meetings, 1965-1975.
4. Historical Notes and Founding Papers.
5. Society Affairs re: staff, office accommodation, rules and regulation, officers, directors and regional societies, 1950-1978.
6. Committees: Correspondence and Reports, 1952-1980.
7. Secretary's Correspondence, 1953-1980.

A detailed listing of the contents of this material has been filed with the Secretary. I acknowledge the advice and help given me by Ms. Shelley Sweeney, the Archivist at the University of Regina; it made my six weeks of sorting, culling, and retention of archival material a rewarding experience.

Progress in compiling "Profiles of Entomologists" of members of the E.S.C. is slow. The Manitoba Society has acquired the necessary monies to pay for their half of the costs of that province's "Profile" booklet. Hopefully it will be completed and published within the next year. Contributions of information on members of other regional societies is very slow in coming in; perhaps the winter months will allow people to devote some time to the project.

P.W. Riegert,
Chairman

Scholarship Committee

There were seven applications for the ESC scholarships. These were evaluated by the eight members of the committee. The committee was generally agreed about the qualifications of two of the applicants (Mr. D.J. Bergvinson and Mr. E.B. McLean) as these were ranked among the top three by all but one committee member.

The eligibility of the winners (Mr. Bergvinson and Mr. McLean) has been confirmed and the winners have been informed in writing and their supervisors were informed verbally. Mr. Bergvinson has indicated he will attend the 1988 ESC meeting; Mr. McLean has written saying he is unable to attend. The unsuccessful applicants have been so informed in writing. Copies of correspondence have been sent to J.A. Shemanuchuk, ESC Secretary.

Members of the committee have been asked to publicize the scholarship fund locally in order to generate new funds. They have also been asked for ideas concerning fund raising that might be appropriately undertaken at the time of the Congress.

There is concern about the appropriateness of some information requested in the scholarship application form. The sex, marital status, number of children, date and place of birth, and whether the applicant is a Canadian by birth or by naturalization have no bearing on the qualifications of the applicant. Revision of the application form may be appropriate.

Finally it is drawn to the attention of the Governing Board that the present schedule for application and for evaluation of the applicants permits selection of winners by late August but it is uncertain how this schedule could be adjusted to fit with the meeting schedule of the ESC for 1988.

R.H. Gooding
Chairman

Insect Common Names and Cultures Committee

Members of the ICNCC during 1986-7 were: E.M. Belton (Chair), P. Benoit, G.A.P. Gibson, J.S. Kelleher, K. Moore, A.G. Robinson, J.R. Spence, P.D. Syme and L.S. Thompson.

Dr. Benoit's *Supplementum* (pp. 114) to the *Nomenclatura Insectorum Canadensium* (NIC) was published this summer. It brings the NIC up to date with lists of corrections and amendments; new french and english names; additions; authors and their abbreviations; and classification of genera.

Dr. J. McNeil is continuing negotiations with the President of the Quebec Society for the Protection of Plants to publish a joint list of common names.

Five new common names were proposed this year and, after study by the Committee, were published in the June ESC Bulletin for consideration by the membership. Of these: oak gall borer and pale banded leafroller are already in the *Supplementum* but as the latter name was withdrawn by its proposer it will have to be deleted from the list of additions. Common green lacewing, blueberry flagleaf webworm and mullein bug were ratified by the membership. An alternative name has been proposed for the ash twig girdler.

I have appreciated the work done by members of the Committee and help from experts at the Biosystematics Research Institute. Dr. J. Chapin, Chair of the ESA Common Names Committee, and I have had a rewarding exchange of ideas in our continued correspondence.

Dr. E.M. Belton, Chairman
I.C.N.C.C.

Achievement Awards Committee

Two members, Dr. Dan Quiring, Dept. of Forest Resources, University of New Brunswick, and Dr. Gilles Boiteau, Agriculture Canada Research Station, Fredericton, were added to the Committee with the approval of the President. These members gave the Committee a wide range of age representation and geographic familiarity.

Two nominations for the Hewitt Award and three for the Gold Medal were received. It was the recommendation of the Committee that the Hewitt Award not be presented in 1987. It was the recommendation of the Committee that the Gold medal be Awarded to Dr. Jeremy N. McNeil. Both recommendations were accepted by the Executive Committee at its 25-26 April 1987 meeting.

The Gold Medallist has been informed and notified that he is required to give a Gold Medal Address to the Society at the time of the Presentation on 28 September 1987. He was informed that the Society will cover all reasonable expenses to attend the meeting. When asked, he provided photos and biographical material, and suggested media that should receive news releases. The citation was prepared in English and French (we acknowledge the work of Dr. Boiteau and, from outside the Committee, of Dr. Philogène). The brochures have been ordered,

the Medal has been ordered, and the Public Relations Committee has been provided with all necessary information about the Medallist and appropriate media. Copies of the citation and a photo have been sent to the Bulletin, but too late for the September issue.

The Committee suggests that the Committee Guidelines be changed to reflect certain realities. (1) That the approval of the President be required for the other two members of the Committee, and (2) that the Committee's selected Award recipients need the endorsement of the Executive Committee. Formerly the Board had to approve both actions, but the Board no longer meets at mid-term, making the guidelines obsolete.

D.C. Eidt,
Chairman

XVIII International Congress of Entomology

The Second Brochure was mailed starting at the beginning of August. This was about six weeks later than anticipated. The delay was brought about by an unscheduled three week visit to England that I had to make on the sudden death of my father, and unexpected printing problems.

The programme to date has three Plenary Symposia, two Plenary Speakers, 50 Symposia, 16 Special Interest Group sessions and 16 Workshops. Additional plenary speakers, symposia, special interest group sessions and workshops are expected.

Over 6,000 copies of the Second Brochure have so far been mailed: each week an additional 75-100 requests are being received. Abstracts for contributed papers and posters have started arriving and registration already stands at over 100.

The Local Organizing Committee is starting to attempt a scheduling of the scientific programme. The National Fund Raising Committee consisting of G.B. Kinoshita (Chairman), J. Hollebhone and J. Tomlin is very active. Financial contributions from the Canadian Forestry Service and the Acadian Entomological Society have been promised following initiatives taken by D.C. Eidt. A generous contribution was received last year from the Entomological Society of Alberta.

H.V. Danks has now completed the second draft of the leaflet on "Insects of Canada" for the Congress. This is now out for review. The National Museum of Natural Sciences has agreed to provide a French translation.

The Orpheum Theatre and the Rossinni Strings Orchestra have now been reserved for the Opening Ceremony, but deposits have not yet been paid. The budget for the Congress is still a major concern. The cost of printing the Second Brochure was exactly as anticipated, but mailing costs are an increasing item. With so many sessions now included in the scientific programme, additional lecture rooms will be needed. However, the current budget allocation appears sufficient.

There have been numerous requests for assistance for travel, etc. At present, the funding situation does not allow a positive response to these requests.

Members of the National Organizing Committee will meet in Penticton during the Annual Meeting of the Society. Other meetings will be held if needed prior to the Congress.

G.G.E. Scudder, Chairman
XVIII ICE Organizing Committee

IAWPRC/CAWPRC

The Canadian Association on Water Pollution Research and Control (CAWPRC) distributed its second annual report. Since the Executive Committee of CAWPRC serves as the Canadian National Member in the International Association on Water Pollution Research and Control (IAWPRC), it was possible to further enhance and strengthen the contribution of Canadian research within that international organization. Current membership of CAWPRC is about 250. Its refereed "Water Pollution Research Journal of Canada" has now some 360 subscribers; publication frequency has tripled over the past 3 to 4 years. The journal's scope encompasses all aspects of water pollution biology; more contributions dealing with aquatic entomology would be welcomed. CAWPRC was a co-sponsor of the 1986 Annual Aquatic Toxicity Workshop held in Moncton, N.B., and will make arrangements for a poster display at the forthcoming 14th Workshop to be held in Toronto, Nov. 1-4, 1987.

At the international level, IAWPRC has signed agreements to cooperate with a number of international organizations including the European Water Pollution Control Association (EWPCA), the International Water Supply Association (IWSA), and the Inter-American Association for Sanitary and Environmental Engineering (AIDIS) which co-sponsored the 13th biennial conference. The Association has non-governmental status with the World Health Organization and has participated in a number of joint activities with WHO, and has maintained liaison with ICSU Committee on Water Research (COWAR) to ensure that there is no overlap.

Association for the Advancement of Science in Canada.

AASC is still in a holding pattern having been unable so far to attract memberships or funding to establish themselves as a significant force in Canadian science. This is reflected in the following observations:

1. Membership

A reduction from 1986-87 in individual and institutional membership from over 1,000 to 800 and 47 to 40 respectively. AASC still includes Friends of Science, Science Focus, Scientists and Engineers for Energy and Environmental Security and the Association for Science in Society as part of their membership.

2. Collaboration with Equinox

The market survey regarding the use of *Equinox* as a vehicle for AASC was completed in February 1987, and 3,500 people indicated an interest in joining AASC and receiving *Equinox*. Since then, however, as *Equinox* has been sold; discussions with *Equinox* are on hold and a new series of negotiations are underway with the Canadian Geographical Society. Collaboration with francophone publications is still under investigation.

3. 1987 Annual Meeting

This was held in conjunction with L'ACFAS on 21 May at the University of Ottawa. The topics included atmospheric changes, toxic wastes, Chernobyl, environment and health, and science and pseudoscience. The Annual Membership Meeting was held after the presentations.

4. COPSE Activities

The Committee of Parliamentarians, Scientists and Engineers have hosted the following talks:

19 March	Dr. Philip A. Lapp	"Engineering the Future"
9 April	Dr. William S. Fyfe	"Global Change — the Quite Economic Crisis"
14 May	Dr. Charles Scriver	"Genetic Predisposition to Disease — A New Dilemma"
11 June	Drs. Norbert Gilmore, Ian Gemmill and Peter Gill	"Aspects of AIDS"

5. Financial Support

CIDA continues to support AASC's project on medicinal plants in Guatemala, however, membership (\$25.00/individual, \$100.00/Society and \$100.00 - \$500.00/Sustaining member) remains the only other source of funding for AASC.

6. Recommendations

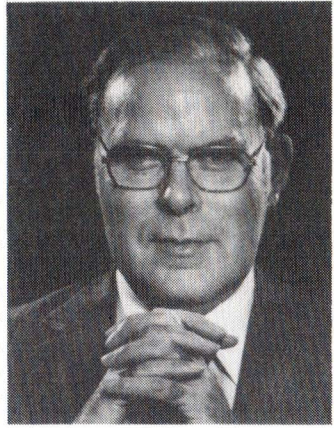
My recommendations based on the above are as follows:

1. Remain supportive of AASC, at least until the next Annual Meeting in May, 1988.
2. Reevaluate ESC's support of AASC at the end of 1988.
3. Consider ways for Ottawa based members of ESC to become more involved in AASC and COPSE activities.

Stuart B. Hill,
AASC and COPSE Observer

HONORARY MEMBERS

Eugene Gordon Munroe



© Karsh, Ottawa

Eugene Gordon Munroe was born in Detroit, Michigan, on 8 September 1919; he moved to Canada with his parents in 1927 and became a naturalized Canadian in 1932. He has been interested in entomology from early boyhood, and joined the Montreal Branch of the old Entomological Society of Ontario in the 1930's, maintaining his membership until the integration of that society with the Entomological Society of Canada, of which he became a member, and later a fellow, when that category was established. He served as editor of *The Canadian Entomologist* in 1958-61 and as president of the E.S.C. in 1963-64; he was the first chairman of the Finance Committee; he has served as B.C.C. representative and on various other committees; he received the Society's Achievement Award in 1982.

Eugene's first entomological employment was as summer assistant at the Lyman Entomological Collection, then located at the Redpath Museum, McGill University. During World War II he served with the R.C.A.F., initially as a radar mechanic, but later on detached duty with the Canadian Army's Western Canada Plague Survey and finally as an instructor and planner in medical entomology attached to R.C.A.F. Headquarters. After the war, he finished his Ph.D. at Cornell University, working on the biogeography of West Indian butterflies; then he spent three years doing research on helminth ecology and teaching medical entomology at the Institute of Parasitology at Macdonald College of McGill University. In 1950 he joined the staff of the Systematic Entomology Unit (later Biosystematics Research Institute) of the Canada Department of Agriculture, where he worked until his retirement in 1979, except for an interval of service from 1965 to 1968 as science adviser and later principal science adviser and head of studies for the Science Secretariat of the Privy Council Office, forerunner of the present M.O.S.S.T.

At Agriculture Canada, Eugene's career was active and productive. He published numerous research papers, mostly on the systematics of Lepidoptera, especially Pyralidae, but some on other families and orders, on methods of systematics, on biogeography and on ecology. His *Classification of the Papilionidae* is basic to the modern interpretation of that group; his *Canada as an Environment for Insect Life* was for a number of years the standard reference on Canadian habitats. He wrote five parts of Dominick et al., *The Moths of America North of Mexico*, is senior editor and for several years was managing editor and chairman of the Editorial Board of that series. He was a member of the International Commission on Zoological Nomenclature from 1958 to 1975. He attended numerous national and international scientific meetings and congresses and was an invited speaker at many of them. His field trips, extending from 1934 to the present, have taken him to 49 American states, to most Canadian provinces and territories, to Central and South America and the West Indies, to several European countries, to East, West and South Africa, and to Thailand, Sarawak, Sabah, Papua-New Guinea and Fiji. Many of these trips were made on behalf of Agriculture Canada, and the material from them is in the Biosystematics Research Institute, where Eugene built up one of the world's leading collections of Pyralidae. He donated earlier private collections to the Lyman Entomological Museum and to Cornell University as well as to the B.R.I. shortly after he joined its staff.

He is the author of over 200 scientific publications. He received the Queen's Silver Jubilee Medal, and is a Fellow of the Royal Society of Canada, an Honorary Life Member and a past President of the Lepidopterists' Society, an Honorary Life Member of the Ottawa Field-Naturalists' Club, and a Socio de Honor of the Sociedad Hispano-Luso-Americana de Lepidopterologia.

Shortly after retiring from the Biosystematics Research Institute Eugene was appointed an Honorary Research Associate of the Lyman Entomological Museum and Research Institute, and at present he is supervising two graduate students working on pyraloid moths. In this period he has worked as a visiting scientist at the British Museum (Natural History), the Leiden Museum, the Bishop Museum in Honolulu, the C.S.I.R.O. in Canberra, the Smithsonian Institution, and several other museums in the United States. He has written the Pyraloidea for the *Check List of Lepidoptera of America North of Mexico*, and the Biogeography and Evolution chapter for Huffaker and Rabb's *Ecological Entomology*. His current projects include a generic revision of the pyraustine Pyralidae, studies of the Pyraustinae of Costa Rica (with D.H. Janzen and W. Hallwachs), of the crambiform Pyralidae of Aldabra (with J.C. Shaffer), of the Pyralidae of

Micronesia, of the Scopariinae of Hawaii, and the Pyralidae of Tortola (with E.C. Pelham-Clinton) and of Cocos I, as well as most subfamilies of Pyralidae for the *Check List of Neotropical Lepidoptera* edited by John Heppner, and is contemplating a study of the Pyraustinae and related subfamilies of southern Africa.

Eugene is married to Isobel Margaret, nee Douglas; their children are Janet (Mrs. E.J. Wilson), of Ottawa, Donald Douglas (deceased), Susan, of Toronto, and Elizabeth, of Edmonton.

H. Glenn Wylie

Glenn Wylie has made major contributions to entomology in Canada through his collection and evaluation of parasitoids of the winter moth and balsam woolly aphid in Europe, his studies of face flies and house flies, his work on the behaviour of parasitoids, and his evaluation of the natural parasitoid complexes in Manitoba of bertha armyworm and flea beetles attacking canola, and of pea aphid. He has contributed to the release of winter moth parasitoids in Nova Scotia and has released parasitoids against flea beetles on canola and against pea aphid in Manitoba. Throughout his career his wide practical knowledge of insect identification and behaviour was freely given to help his colleagues and to inform the public. He has served the ESC as a member and chairman of the By-laws, Rules and Regulations Committee and most notably as Secretary, and the Entomological Society of Manitoba as President and by chairing the Publicity and Annual Meeting committees at various times. His editorial skills have been extensively used by his colleagues and as a reviewer for *Can. Ent.* and other international journals. His publications include 46 research and 20 other scientific publications and reports.



Glenn Wylie was born and grew up in Wingham, Ontario and received his B.A. (Honors Zoology) from the University of Toronto in 1949. He was immediately hired as a Technical Officer by the Agriculture Canada laboratory at Belleville, Ontario and in 1950 he was sent to Europe to conduct a search in France and Switzerland for predators of the balsam woolly aphid, a major pest of balsam fir in the Atlantic Provinces. The search provided a list of European predators and detailed information on the biology and life history of each species. His evaluations, in co-operation with staff of the Commonwealth Institute of Biological Control, led to the importation of six predator species, four of which became established in Canada. Information on the pest and its predators were published after he spent 3 years at Oxford, where he completed his Ph.D. and described factors affecting host-finding by a parasite of housefly.

While still a student at Oxford he initiated studies for the Dominion Parasite laboratory, Belleville, on insect parasites of the winter moth, a major imported defoliator of deciduous forest trees in Nova Scotia. This became a full-time project during 1954-57 and extended to Western Europe and Canada. On the basis of these studies, he recommended the importation of the parasites *Cyzenis albicans* (Fall.) and *Agrypon flaveolatum* (Grav.). This recommendation was approved and he participated in collecting the initial parasite colonies in Europe and released them in Nova Scotia in 1954. Both parasite species became established, reduced the pest and have maintained it at non-economic levels for 20 years. The total research programme cost approximately \$160,000 and saved about 1,500,000 cords of oak (1969 value, \$12,000,000) and large amounts of other valuable deciduous trees in Nova Scotia.

From 1958-1972, Dr. Wylie published studies of flies (including house fly and face fly) that are of agricultural concern. These studies included host discrimination and host suitability, parasite sex ratios, superparasitism, effects of host and parasite density, effects of host and parasite size, and intra- and interspecific competition. The results of these studies were utilized by the USDA in developing mass rearing procedures for parasites released in inundative control programmes against house fly and other pest fly species. In addition, an evaluation of parasitism of the introduced face fly by native parasites was an important contribution to understanding the biology of this pest.

From 1966-72, in recognition of this wide practical knowledge of insect identification and behaviour, Dr. Wylie was made responsible for responding to public inquiries at the Belleville Institute.

In 1972, Dr. Wylie was transferred to the Winnipeg Research Station where he rapidly re-established a research program, this time dealing with the insect parasites of pests of the rapeseed crop. This programme provided the first list of parasites of a sporadic rapeseed pest, the bertha armyworm. Dr. Wylie studied the biology of these native parasites, and provided an evaluation of their effectiveness as well as that of the European parasites being considered for importation.

Since 1975 he has emphasized studies of the parasites of the flea beetles attacking rape and has contributed substantially to the knowledge of these pests. His evaluation of the native insect parasites of these pests and the information on European parasites collected by the Commonwealth Institute of Biological Control led to the decision to import European species. He began releases of these species in 1978. An evaluation of this results of these releases has been submitted for publication in *Entomophaga*.

In 1981, Dr. Wylie expanded his research program to include parasites of the pea aphid in Manitoba. He has clarified the role of indigenous parasitoid species and arranged for importation of an additional parasite species. Releases of *Aphidius smithii* in 1983 and 1984 have been followed by subsequent recoveries indicating overwintering and dispersal of this parasitoid.

Glenn Wylie retired in January 1987. Throughout his 37-year career as a researcher, he has made solid contributions in both applied and basic research and has provided sound information and support for his many colleagues and friends in Canada and internationally. His organizational abilities have been given freely to the Entomological Societies of Canada and Manitoba through committee work and during his 3-year term as Secretary for the E. S. C. Presidents during Glenn's secretaryship were: Glenn Wiggins (1982), George Ball (1983), and Ray Morris (1984).

POSTGRADUATE AWARDS 1988

Invitation for Applications Entomological Society of Canada

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

Eligibility. The successful applicants must be either Canadian citizens, or landed immigrants with Bachelor degrees from Canadian universities. Applicants must begin their first year of postgraduate studies between June 15, 1987, and December 15, 1988. The studies and research must be carried out at a Canadian university. Each award is conditional upon certification by the Department Head that successful applicants have been accepted into the first year of a program of study and research for an advanced degree with full graduate status. A student who was unable to gain admission or enters a graduate school as a qualifying candidate is not eligible to receive an award.

Method of Application. Applicants should submit a properly completed form, with supporting documents, in accordance with the instructions printed on the application form. Applications must be received by the Secretary of the Society no later than **June 15, 1988**.

Process of Selection and Award Presentation. Applications are reviewed by a committee of the Society and announcement of the two winners will be made in September 1988 and each winner will receive a certificate. Payment of the award will be made in January 1989.

Regulations

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

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

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

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

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

BOURSES POUR ÉTUDIANTS POST-GRADUÉS 1988

Société Entomologique du Canada

Avis

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

Éligibilité. Les candidats choisis doivent être citoyens canadiens ou résidents reconnus du Canada avec un baccalauréat d'une université canadienne. Il est aussi obligatoire que les candidats commencent leur première année d'études post-graduées entre 15 juin, 1987 et 31 décembre, 1988, et que les études et les recherches soient faites à une université canadienne. Chaque bourse ne sera accordée que lorsque le Chef du Département vérifie que les candidats choisis ont été acceptés en première année d'un programme d'études et de recherches en vue d'un diplôme supérieur avec tous les privilèges rattachés au status d'étudiants post-gradués. Un étudiant qui n'a pas pu obtenir son admission à une Ecole de Gradués ou qui s'inscrit en vue de compléter l'obtention de crédits n'est pas éligible pour recevoir une bourse.

Formalités de la demande. Les candidats devront soumettre leur candidature à l'aide du formulaire approprié et y ajouter tous les documents requis sur la formule de demande. Les demandes devront être reçues par le Secrétaire de la Société au plus tard le **15 juin 1988**.

Sélection et présentation de bourses. Le choix sera fait par un comité de la Société et l'annonce des deux candidats choisis se fera en septembre 1988, après quoi les récipiendaires recevront un certificat. Paiement de la bourse aura lieu en janvier 1988.

Règlements

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

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

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

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

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

RECRUTEMENT DE MEMBRES

Il y a eu un déclin de membres de la SEC depuis quelques années. Afin de redresser cette situation, la SEC organise un recrutement de nouveaux membres. Chaque membre peut faire sa part en abordant des entomologistes qui ne sont pas membres et en leur expliquant les avantages d'être membre de la SEC. Ces avantages sont documentés dans l'éditorial des invités (pages 1-2) du bulletin de la SEC 19(1). Pour faciliter cette tâche, une demande d'adhésion est incluse avec ce numéro du Bulletin. Si chaque membre attire *une* recrue, la force de l'ESC et sa compétence pour servir ses membres sera infiniment rehaussée.

MEMBERSHIP RECRUITMENT

For some years the membership of ESC has been declining. To redress this situation, ESC is conducting a membership drive. Every member can help by approaching entomologists who are not members, and explaining to them the benefits of ESC membership. Those benefits are documented in the guest editorial (pages 1-2) of the ESC Bulletin 19(1). For convenience, an application for membership is included in this issue of the Bulletin. If every member recruits *one* new member, the strength of ESC and its ability to serve its membership will be enhanced immeasurably.

NOMINATIONS POUR MEMBRES HONORAIRES

La Société a des places vacantes pour de nouveaux membres honoraires. Veuillez envoyer les nominations au président du comité de membres. Les nominations peuvent être envoyées en tout temps, mais, afin que les personnes nommées soient élues en 1988, le président devrait recevoir les nominations avant le 1 mars 1988.

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

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

NOMINATIONS FOR HONORARY MEMBERS

The Society has vacancies for new honorary members. Please forward nominations to the Chairperson of the Membership Committee. Nominations may be forwarded at any time, but, in order for nominees to be elected in 1988, nominations should reach the Chairperson by 1 March 1988.

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

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

THE DISEASES AND INSECTS OF VEGETABLES IN CANADA

An ESC steering committee has now been formed to work with the Canadian Phytopathological Society in the production of a publication on the Diseases and Insects of Vegetables in Canada.

Crops to be covered include artichoke, beans, beets, broccoli, Brussels sprouts, cabbage, cantaloupe, carrot, cauliflower, celery and celeriac, chicory, chives, cucumber, eggplant, garlic, kale, kohlrabi, leek, lettuce, marrow, melons, mint, onion, parsley, parsnip, peas, peppers, potato, pumpkin, radishes, rhubarb, rutabaga, salsify, shallots, spinach, squash, sweet corn, Swiss chard, tomato, summerturnips and zucchini, as well as alfalfa and bean shoots, fiddleheads, mushrooms including *Pleurotus*, spices, herbs, and possibly ginseng.

Members who wish to contribute are asked to contact Drs. W.J. Turnock (Wpg. Res Sta), R. Vernon (Vanc. Res Sta), J.A. Garland (Neatby Bldg, Ottawa), R. Jaques (Harrow Res Sta), G. Boivin (St. Jean Sta) or L.S. Thompson (Charlottetown Res Sta).

LES MALADIES ET INSECTES NUISIBLES DES PLANTES POTAGERS DU CANADA

La Société a maintenant créé un comité directeur pour travailler avec la Société Phytopathologique du Canada pour la préparation d'une publication au sujet des Maladies et Insectes Nuisibles des Plantes Potagers du Canada.

Les plantes potagers pour ce reportage sont: l'ail, l'artichaut, l'aubergine, le betterave, le brocoli, le cantaloup, la carotte, le céleri et le céleri-rave, le chou, le chou de Bruxelles, le chou-fleur, le chou frisé, le chou-rave, la citrouille, la ciboulette, le concombre, la courge (la courge zucchini inclus et aussi la courgette), l'échalote, l'endive, l'épinard et l'épinard Suisse, les haricots, la laitue, le maïs doux, les melons, la menthe, le navet d'été, l'oignon, le panais, le persil, les petits pois, le poireau, le poivron vert, la pomme de terre, le radis, la rhubarbe, le rutabaga, le salsifis, la tomate, aussi bien que les pousses de la lucerne, des haricots verts et de la fougère, les champignons (*Pleurotus* inclus), des condiments, des herbes potagères et possiblement le ginseng.

Le comité invite des membres collaborateurs qui doivent faire parvenir leurs noms au Dr W.J. Turnock (Sta Rech, Wpg), Dr R. Vernon (Sta Rech, Vanc.) Dr J.A. Garland (Édifice Neatby, Ottawa), Dr R. Jaques (Sta Rech, Harrow), Dr G. Boivin (Sta Rech, St. Jean) ou au Dr L. Thompson (Sta Rech, Charlottetown).

J. Garland
Chairman, Steering Committee

POSITIONS AVAILABLE

University of Saskatchewan

Bioinsecticide Research Laboratory

A number of Post Doctorate and Research Associateship positions are available for research on biochemistry, regulation and molecular biology of: (1) *B. bassiana* secondary metabolism, (2) *B. bassiana* hydrolytic enzymes and their gene cloning, (3) susceptibility of grasshoppers to entomopathogenic fungi, (4) insect defense reactions and immunity.

At this time, candidates will be sought with research expertise in the following areas:

Fungal and Bacterial Physiology. The application of macromolecular analysis, enzymology and regulation to entomopathogenic microorganisms.

Fungal Genetics. The application of general and molecular genetics to entomopathogenic fungi.

Microbe-Insect Interaction. The application of insect physiology to study microbial enzymes and whole organismic interaction.

Additional positions will be advertised at a later date.

Successful applicants will also have opportunity to gain teaching experience by contributing to graduate and undergraduate students' education in microbial genetics, microbial pest control program, biotechnology, and genetics of industrial microorganisms.

Applicants must have a Ph.D. degree in any of the following: biochemistry; insect molecular biology; fungal biochemistry or molecular biology; molecular genetics. Postdoctoral experience is an asset.

Appointments will be made starting 1st January 1988 or as soon as possible. Salary will be \$22,000 - \$33,000 per annum depending on qualifications and experience. Applications, including a full c.v., reprints, plans for future research and the names and addresses of three references should be sent to:

Dr. George Khachatourians
Department of Applied Microbiology
and Food Science
University of Saskatchewan
Saskatoon, S7N 0W0

MISCELLANEA

Large Grasshopper at Expo '86

One of the largest Acrididae to be taken alive in Canada has been the adventive, cyrtacanthacridine Vagrant grasshopper, *Schistocerca nitens nitens* (Thunberg) [syn. *S. vaga vaga* (Scudder)]. The most recent record is of a female, now in the B.C. Provincial Museum, Victoria, taken on the Vancouver "Expo 86" site by Don Hanson, 12.X.1986. The species is very widely distributed in the Americas, and is native to the southwestern United States. It is likely that the specimen was imported from California with ornamental plants, though it may have been brought in with fruit or vegetables. It could also have hitchhiked in a tourist's car as the species seems to favour coming to Canada in "Expo" years. The Lyman Entomological Museum has another, previously unreported, female specimen from Vancouver, 10.III.1967, intercepted in a shipment of Kenita palms from Santa Barbara, California. It apparently had exhibited the frequent U.S. ignorance of Canadian geography by going to the wrong side of the continent for "Expo 67"! The only recorded Canadian specimen did, however, make it to the East, imported with Californian vegetables at Truro, Nova Scotia, in 1972 [Vickery *et al.*, 1974, *Mem. Lyman ent. Mus. & Res. Lab.* 1; Vickery & Kevan, 1983, *Ibid.* 13 (2)]. Because of climate, it is unlikely that *S. nitens* could become established in Canada, even in balmy southwestern British Columbia. Were this possible, it would doubtless occur there naturally already.

D. Keith McE. Kevan,
Department of Entomology and
Lyman Entomological Museum,
McGill University,
Ste-Anne-de-Bellevue, Quebec.

Grasslands Park Initiative

A conference jointly hosted by the University of Regina geography department and the Canadian Parks and Wilderness Society has resulted in an initiative that could break the current impasse over creating Grasslands National Park. The initiative suggests the Water Corporation of Saskatchewan maintain its ownership of waterbeds in the region and calls on Environment Canada-Parks to negotiate an agreement for water use.

A coalition of five conservation groups presented the initiative today to federal Environment Minister Tom MacMillan and his provincial counterpart, Herb Swan. Members of the coalition are the Canadian Parks and Wilderness Society, the Saskatchewan Natural History Society, the Sierra Club (Saskatchewan), the World Wildlife Fund (Canada) and the Nature Conservancy of Canada. Representatives met in Regina during a joint geographers-conservationists conference held at the U of R September 17 to 20. The conservation sessions were organized by Dr. Dave Gauthier of the geography department.

Speaking for the coalition, Dr. David Henry of the parks and wilderness society and Keith Neufeld of the Sierra Club agreed that, in their view, creating the park is the only way to protect a significant portion of native prairie.

Federal-provincial agreements signed in 1981 would have resulted in a national park covering 350 square miles in southwestern Saskatchewan. However, the park has yet to be created because federal parks policy is to own all water rights within a national park, and the water corporation is unwilling to surrender its rights to the Frenchman River and other water beds flowing through the park. Dr. Henry said, "The initiative could solve this last remaining impediment to creating Grasslands National Park."

BOOK REVIEW

Free, J.B. 1987. *Pheromones of Social Bees*. Comstock Publishing Associates, Cornell University Press, Ithaca, N.Y. 218 pp. hardcover U.S. \$29.95.

The objective of this book is to examine the role of pheromones in social bee biology, particularly in the honey bee *Apis mellifera*. It is reasonably comprehensive in scope, covering subjects such as the communication of a queen's presence, inhibitory and stimulatory effects of queen pheromones on worker behavior, mating, nestmate recognition, alarm, and bumblebee pheromones. The book focuses on work done by Free and his colleagues at Rothamsted Experimental Station in England during the last 35 years; research by other authors is also reviewed, although some major studies have been overlooked.

The major theme which emerges from this book is that honey bee pheromone research has produced highly contradictory results in many areas, resulting in excessive speculation. While Free attempts to reconcile the different approaches and conclusions in the literature, the overall impression left by his book is of a confusing body of research which is in great need of redirection and more precise experimental design and data interpretation. This book would have benefited from a more careful review by a pheromone chemist as well; for example, no mention is made of the chiral nature of the queen-produced 9 HDA, which is an important factor in interpreting its function.

In summary, *Pheromones of Social Bees* contains much useful information, but a more critical approach would have increased the value of this book, particularly by performing the necessary task of directing future honey bee pheromone work in more profitable directions.

Mark Winston
Biological Sciences
Simon Fraser University

NEW JOURNAL

A new quarterly, the *JOURNAL OF INSECT BEHAVIOR*, is now available from Plenum Publishing Corporation. Edited by William J. Bell of the University of Kansas and Thomas L. Payne of the Virginia Polytechnic Institute and State University.

The journal features research articles and short critical reviews by entomologists on all aspects of the behavior of insects and terrestrial arthropods. Topics include, but are not limited to, insect motor patterns and orientation, quantitative ethology, social behavior, behavioral ecology, neurophysiology of behavioral responses, pharmacological probes into behavior, genetic and developmental determinants, and theoretical, mathematical, and computer models of behavioral systems.

The price of a four-issue subscription is \$85.00 in the United States (\$96.00 elsewhere) for institutions and \$39.50 in the United States (\$45.50 elsewhere) for individuals. A free examination copy may be obtained by writing to the Sample Copy Department, Plenum Publishing Corporation, 233 Spring Street, New York, NY 10013-1578.

For more information on this journal, please contact Marianne Emmet at (212) 620-8420 or Colin Costello at (212) 620-8433. Review copies are available.

RECENT BOOKS

- Kuorna, O. (ed.) 1986 Butterflies of Europe. Vol. 8. Aspects of the conservation of butterflies in Europe. (AULA-Verlag GmbH, Weisbaden Luisenplatz 2, Postfach 1366, D-6200 Weisbaden, W. Germany.)
- Symposium, — Host finding in adult phytophagous insects. (J. Insect Physiology, March 1988) (Dr. S.B. Ramaswamy, Dept. of Entomology, Drawer EM, Mississippi State, Miss., U.S.A. 39762.)
- Bright, D.E. 1987. The metallic wood-boring beetles of Canada and Alaska (Insects and Arachnids of Canada — Pt. 15) (#A42-42-1986-15E, Canadian Government Publishing Centre, Ottawa, Ont. K1A 0S9).

RECENT DEATH

Herbert Habeeb, 217 Golden West Blvd., Ojai, California 93023, member since 1971, died April 20, 1987 in Ventura County, Calif.

PERSONALIA

Harold F. Madsen 1921-1987

Dr. Harold F. Madsen passed away September 13, 1987 at the Penticton General Hospital, in Penticton, British Columbia. Harold was born in San Jose California and was raised and educated there. He started his career in entomology while still a youth and his pursuit of the subject became formalized while attending San Jose State College for a B.A. in Biological Sciences. During World War II he served with the U.S. Navy in the Pacific and then clearly focused his interests in entomology at UC Berkeley where he obtained a Ph.D. in 1949. For the next 15 years Harold investigated the biology and control of insects and mites attacking apples, pears, apricots and walnuts while making logical progress through the ranks to associate professor in 1964.

Harold left Berkeley to become Head of the Entomology Section at the Agriculture Canada Research Station in Summerland, B.C. He maintained his position at the leading edge of entomological research concerned with the development of the pest management concept for a further 21 years at Summerland. During his employed career as an entomologist, Harold published 118 refereed papers and a further 116 miscellaneous articles. He retired in late 1985.

In addition to his academic contributions to the science of entomology, Harold was a hard-working and very active supporter of Entomological Societies. His extraordinary organizational abilities allowed him to serve with distinction on the executive in various capacities of the Entomological Society of Canada, including a term as President. He was president of the Entomological Society of America, Pacific Branch and was also president of the Entomological Society of B.C. He was a fellow of the ESC and an honorary member of the ESA and the ESBC. He was a member of the F.A.O. Expert Committee on Integrated Pest Management and was an Adjunct Professor in Biological Sciences at Simon Fraser University. Harold was also an active member and enthusiastic supporter of the Okanagan Natural History Club.

During his "retirement" Harold was President of the ESC, was conducting a study of Okanagan alpine lepidoptera and continued some of his work in orchard pest management. We very much regret his passing.

N.P.D. Angerilli
R.D. McMullen

SCHOLARSHIP

The Chemical Institute of Canada Pestcon Graduate Scholarship

The Pestcon Graduate Scholarship, was established from the surplus funds generated by the V1th International Congress of Pesticide Chemistry held in Ottawa, Canada, in August, 1986, to support postgraduate work in pesticide science.

The investment of the funds will be administered by a Board of Trustees consisting of the Executive Director of The Chemical Institute of Canada, the Treasurer of The Chemical Institute of Canada and the Chairman of the Scholarship Selection Committee. The amount of the Scholarship will be determined each year by the Trustees from the annual interest generated by the fund.

The scholarship is open to Canadian graduate students (including landed immigrants) in *all* areas of pesticide science in the second or subsequent years of their graduate study.

The Scholarship is tenable for a period of 12 months and has a value of approximately \$3,000. One Scholarship is awarded each year and may be held simultaneously with other scholarships, fellowships or awards.

Applications must be submitted in writing before *March 1* of each year to the Executive Director of The Chemical Institute of Canada, Suite 300, 1875 Alta Vista Drive, Ottawa, ON, K1G 3Y6, along with a curriculum vitae and brief (500 words or less) description of the candidate's research project and progress to date. Applications must also be accompanied by an official transcript of the academic record of the candidate.

Applicants must advise the Selection Committee of the name and address of their supervisor and one other person whom they have asked to provide a confidential assessment of their ability to conduct research.

The name of the Scholarship holder will be announced prior to June 1 unless the Selection Committee feels that no suitable candidate exists. Payment of the Scholarship will be made in two instalments, October 1 and January 1, on notification from the supervisor that the student is making satisfactory progress.



Notice for Nominations

The nominations for all officers must be in to the secretary no later than March 15th, 1988.



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

Bulletin Deadline

The deadline for the next issue, Vol. 20, no. 1 is January 15, 1988.

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