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# ENTOMOLOGICAL SOCIETY OF CANADA

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The **Bulletin** is your medium for publishing and receiving news and opinions. It is the principal medium by which the ESC keeps you informed.

## CONTRIBUTIONS

Contributions and correspondence should be sent to: D. C. Eidt, Editor, Bulletin of the Entomological Society of Canada, P. O. Box 4000, Fredericton, New Brunswick E3B 5G4. Inquiries about subscriptions and back issues should be referred to the Treasurer, Entomological Society of Canada, 1320 Carling Ave., Ottawa, Ontario, K1Z 7K9.

## BOOK REVIEWS

Books for review should be sent to Dr. Carl Yoshimoto, Chairman, Editorial Board, ESC, Biosystematics Research Institute, Agriculture Canada, Ottawa K1A 0C6.

## DEADLINE

The deadline for the next issue, Vol 6, No. 2 for June 1974 is 15 May. The approximate date of mailing will be 15 June.

We regret to announce the passing of Professor Albert W. Baker, Entomological Society of Ontario Secretary-Treasurer 1911-1926, President 1927-29, Fellow 1963; Entomological Society of Canada President 1952-54, Honorary Member 1963, at Sunnybrook Hospital, Toronto, 26 August 1974, in his 83rd year.

## *Editorial*

### 1974 ANNUAL MEETING

With this meeting, the Special Interest Group (pronounced SIG) left the experimental stage and became an operational method of manipulating entomologist communication and orientation. Thirteen SIGs, ranging in format from bull sessions to symposia, according to the requirements of the groups, permitted varied responses and interactions to a wide range of stimuli.

The ladies program and the social functions were very good. Few of us had ever seen so many mates and larvae of delegates, and large, boiled *Homarus americanus* in one place.

### FREE CAN. ENTS?

Its no longer necessary to jog down to the library, the Can. Ent. is free! Through its page charges, subscriptions, and sales of reprints, the *Canadian Entomologist* is virtually self-supporting; the *Memoirs* are completely self-supporting.

Membership fees are used almost entirely to support Society activities. What are these activities? Holding annual meetings; encouraging students, popular writers on insects, and insect photographers; providing an employment service; honouring achievement; influencing science policy, directly and through umbrella organizations; preparing and distributing briefs such as those on pesticides and the proposed Biological Survey of Insects; providing certain scientific services such as the list of insect colonies; most important of all, maintaining the fraternity through annual scientific sessions, task groups, social gatherings, and the *Bulletin*; and a multitude of other activities.



Entomological Society of Canada Medal



*for*

Outstanding Achievement  
*in*  
Canadian Entomology



*Presented to*

*Philip S. Corbet*

Halifax, Nova Scotia, August, 1974

The Entomological Society of Canada Gold Medal for 1974 is awarded to Professor Philip S. Corbet in recognition of his outstanding contributions to Canadian Entomology.

Philip Corbet was born in 1929 at Kuala Lumpur and spent his first two years in Malaya. His father, Dr. A. S. Corbet, was a scientist with broad interests who worked as bacteriologist, chemist, and entomologist in the course of his career, and his mother, Irene Trewavas, has been an educator of children and schoolteachers. His sister, Dr. Sarah A. Corbet, is a freshwater biologist who presently teaches at the University of Cambridge. Philip obtained his early education in New Zealand and England. Subsequently he obtained the degree of B.Sc. (General) in 1949 and B.Sc. (Special: Zoology) in 1950, both with First Class Honours, from the University of Reading. He obtained a Ph.D. in entomology in 1953 at the University of Cambridge where his studies were supervised by Professor (now Sir Vincent) Wigglesworth. In 1962 Philip was awarded a D.Sc. in zoology from the University of Reading. He was married in 1957: his wife, Hildegard, who obtained a Ph.D. in psychology at Carleton University, Ottawa, has been an Assistant Professor Psychology at the University of Waterloo and is a Registered Psychologist (Ontario).

Philip's research has covered a variety of subjects within the broad disciplines of zoology and ecology. Much of his work falls within two broad areas: freshwater biology, including specialisation on the biology of dragonflies; and medical entomology, including specialisation on the biology of mosquitoes. His research has taken him to several parts of the world. From 1954 to 1962 he worked with the East Africa High Commission in Uganda, initially at the Freshwater Fisheries Research Organisation, Jinja and, from 1957, at the Virus Research Institute, Entebbe. He came to Canada in 1962 to join Agriculture Canada at the Entomology Research Institute, Ottawa, and in 1967 became Director of the Research Institute, Belleville. In 1971 he was appointed Professor and Chairman of the Department of Biology, University of Waterloo, Ontario, and in May 1974 became Professor and first Director of the Joint Centre for Environmental Sciences, University of Canterbury and Lincoln Agricultural College, Christchurch, New Zealand.

Much of Philip's research has concerned seasonal and daily patterns of insect development and behaviour. His interest in these subjects was stimulated by his early work on the seasonal regulation of the adult flying season in British dragonflies; this included field investigations of larval growth and of the temporal patterns of emergence and adult density. The field work was supplemented by laboratory experiments on factors affecting developmental arrest. These studies led to the recognition of general principles governing seasonal regulation in Odonata and resulted in the publication of two books. The first was written to interest the general reader in natural history. The second aimed to present an integrated ecological study of the whole order, embracing tropical as well as temperate representatives, and was written for specialist readers; it has helped to systematize and direct subsequent research on the Odonata. The initial work on dragonflies marked the beginning of Philip's subsequent investigations on periodicities and rhythms of various activities such as emergence, egg-laying, feeding, swarming, and biting in other insect groups, particularly the Trichoptera and Diptera. He has also studied the modification of periodicities by microclimatic factors.

Philip's interest in the biology of aquatic insects led him into studies on the role of tropical culicine mosquitoes as vectors of virus diseases. His early work in this area involved the development of techniques for recognising potentially infective mosquitoes. He also studied the distribution of egg-laying sites of sylvan, culicine mosquitoes and the effects of predation by larvae of a carnivorous mosquito that had earlier been proposed as a biological control agent. Subsequently he participated in studies which established that anopheline mosquitoes were the principal vectors of O'nyong-nyong virus, an epidemic resembling dengue fever that eventually involved several million people in East

Africa. This work provided the first evidence of a virus epidemic being transmitted by anopheline mosquitoes. Subsequently he was involved in collaborative studies which resulted in the isolation of other viruses from anophelines.

On coming to Canada in 1962, Philip continued his interest in freshwater biology and medical entomology, but concentrated on mosquitoes in the high arctic, studying their taxonomy, reproduction and general phenology. He paid particular attention to their sources of nitrogenous food and their mode of reproduction; this led to the discovery of facultative autogeny, a kind of ovarian development that appears to represent a specialized adaptation to intermittent shortage of vertebrate hosts. His earlier interest in the influence of microclimatic factors on insect behaviour was extended to include weather and microclimate at high latitudes, and this has led to a general explanation as to why terrestrial microclimate can be ameliorated at latitudes above 70°. In the mid 1960's he led the research team which advised Expo' 67 on the shadfly nuisance. Since his appointment as Director of the Research Institute, Belleville, in 1967, Philip has been closely associated with agricultural science and has developed a special interest in pest management and integrated control. Just before leaving Canada he completed the third and last volume of E. M. Walker's *The Odonata of Canada and Alaska*.

A measure of Philip's scientific productivity is the fact that he has authored or co-authored more than 140 scientific papers, seven review articles, three books, and numerous articles of a less specialised nature. He has also presented many invitation lectures at national and international meetings and symposia.

Research accomplishment is only one facet of Philip's varied career. Over the years he has found time to serve on numerous national and international committees including, among others, the Ontario Department of Agriculture and Food Pesticide Advisory Committee; the Defence Research Board Advisory Committee on Entomological Research; the Canada Committee on Biting Flies; the Population Task Force of the Canadian Council of Resource and Environmental Ministers; the Steering Committee of the United States Project "Pest Management for Major Crop Ecosystems", a part of the International Biological Program; and United Nations committees of both the Food and Agriculture Organization and the World Health Organization. He has served as an advisor on vector biology to the World Health Organization in East Africa and to the Rockefeller Foundation in Brazil. He is a member of many scientific societies including the Entomological Society of Canada, having served on the Governing Board from 1969 to 1973 and as President during 1971-72. As President, he provided the Society with strong, dynamic leadership. He was a strong proponent of the Society's 1970 resolution on population limitation and resource use and was responsible for preparing the Society's 1971 publication *Pesticides and the Environment*. These two statements can be regarded as landmarks in the development of the Entomological Society of Canada's role in Canadian society.

Recently Philip's interest in biological education has led to his acceptance of faculty appointments, first at the University of Waterloo and now at the University of Canterbury and Lincoln Agricultural College. His enthusiasm and broad entomological experience will undoubtedly have a beneficial influence on university students at both the undergraduate and graduate levels.

The Entomological Society of Canada honours Professor Corbet for his outstanding contributions to entomology in research, public service and education.

## HARRIS TAKES OFFICE



Ron Harris was installed as President for 1974-75 at the Annual Meeting, 28 August 1974, Halifax. He combines the qualities of a respected insecticide specialist and concerned environmentalist. His administration will be dealing with the contemporary role and responsibilities of the Society, the proposed Biological Survey of Insects, and the manpower situation. Among internal matters of concern will be the conduct of future meetings, revision of the By-Laws, implementation of Fellowships, and a deteriorating financial situation.

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## NEWS OF THE BIOLOGICAL SURVEY

A committee consisting of J. A. Downes, D. K. McE, Kevan and E. G. Munroe (ESC members) and J. Aldous, Vice-president of B.C.C., has been established jointly by the Entomological Society and the Biological Council of Canada to take action on the Society's proposal for a Biological Survey of the Insects of Canada. It intends to approach the Ministry of State for Science and Technology in the very near future.

The B.C.C., in accordance with their resolution when they examined the ESC proposal (B.C.C., Minutes of Annual Meeting, Halifax, March 1974, p.5) have also set up a committee to work on a more extensive project for a general Biological Survey of Canada. Dr. Roy Taylor, Director of the Botanical Gardens at the University of British Columbia and Past-president of B.C.C., is the chairman of this committee and the entomological member is J. A. Downes.

The ESC Brief (Bulletin 6(2) Supplement) was the subject of an open forum at the recent Annual Meeting at Halifax. There was an active, somewhat free-ranging, discussion that touched upon principles, priorities and practice. A general consensus led quickly to a motion "That this group strongly supports the proposal that a Biological Survey of the Insects of Canada be undertaken, to serve the objectives outlined in the Brief, and expresses the hope that it can be initiated as soon as possible". This was carried by many votes to one, and the single dissent was later withdrawn. The Brief has met with general approval also in a rather substantial correspondence from many sources. All this discussion is very helpful in formulating aims and procedures as clearly as possible and in eliciting support for the project in general. Continuing expression of opinion from members or from interested organisations will be welcome.

J. A. Downes

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## GOLD MEDALLISTS

1962, R. F. Morris  
1963, A. W. A. Brown  
1964, R. Glen  
1965, M. L. Prebble  
1966, C. W. Farstad  
1967, B. N. Smallman

1968, W. G. Wellington  
1969, K. E. F. Watt  
1970, C. S. Holling  
1971, J. G. Rempel  
1972, R. W. Salt  
1973, B. Hocking

## ENTOMOLOGICAL REFLECTIONS



*Address of Professor Philip S. Corbet, Joint Centre for Environmental Sciences, University of Canterbury and Lincoln College Christchurch, New Zealand, to the Joint Annual Meeting of the Entomological Society of Canada and the Acadian Entomological Society, Dalhousie University, Halifax, Nova Scotia, 27 August 1974, when he received the Gold Medal Award for Outstanding Achievement of the Entomological Society of Canada.*

### ACKNOWLEDGMENT

I am particularly glad to have this opportunity to share with you in person my feeling of pleasure and privilege at having been chosen as this year's recipient of the Gold Medal of the Entomological Society of Canada. The award gives me pleasure because it will provide a tangible reminder of the happy, stimulating and extending twelve years that I have spent in Canada as an entomologist. And I feel a sense of privilege in being so recognized by the Entomological Society of Canada — an association distinguished by the achievements of its members and by the contributions it has made, to entomology and to the scientific community as a whole.

In accepting this award I am reminded how much a person like myself is indebted to those with whom he works, whether these be members of the Society's Governing Board or an Advisory Committee, an Editor, graduate students or collaborators; or colleagues who give guidance, leadership or inspiration, as entomologists like Antony Downes, George Holland and Brian Hocking have given me in Canada.

During the twelve, rewarding years that I have spent here, at the Entomology Research Institute, at the Research Institute, Belleville and at the Department of Biology, University of Waterloo, I could not have wished for more generous and stimulating associates; and I welcome the opportunity of acknowledging this fact here, as I move from the third wonderful country I have worked in to a fourth.

### REFLECTIONS

During the next few days we shall necessarily be concerned with practical entomological problems that it is our responsibility, as entomologists, to solve in order to meet one of our obligations to society. Partly on this account, I shall adopt a different emphasis in this talk. To provide a perspective, I shall first reflect briefly on the events that have led to the holding of this meeting; and then I shall consider some of the possible reasons that exist for studying insects.

I find it intriguing that some 4.6 billion years after this planet was formed, 3 billion years after life materialized on it, 350 million years after insects appeared, and 7 million years after the primates arose, members of one

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Reprints of Professor Corbet's address are not available, but because of its broad appeal, in particular to students, it may be reproduced in any numbers without further permission.

species of primate should choose to assemble in one spot (much as certain *Diptera* do over a swarm-marker) in order to exchange information and ideas about insects – creatures which, until these last few moments in their history, had not attracted the attention of other animals except as objects to be eaten or nuisances to be driven away. It might well have been otherwise, particularly if the world's first cerebral opportunist had evolved from one of the largest families of organisms instead of from one of the smallest. We may sometimes forget how exceptional and ecologically anomalous were the developments that have made possible the human societies of today, and that if it had been the beetles, rather than the primates, that had produced a species capable of imaginative thinking, this gathering, presided over perhaps by a chairweevil, might be known as the Vertebratological Society of Grylloblattaland or perhaps of Greater Pterygota, or of the Union of Coleopterous Republics.

At this point, and since humans rather than beetles are holding this meeting, we may usefully reflect on some of our reasons for studying insects. Indeed, it was with such a question that a colleague and I used to introduce the entomology course given by the Department of Biology at the University of Waterloo. The reasons that we identified (not to put too fine a point on it) were two. First, insects constitute sources of wonder and delight; and as such they also provide a rich medium for sharing pleasure with other humans. This consideration applies whether or not a person wishes to make entomology, or even biology, his or her career. Second, insects are adapted to virtually every terrestrial and freshwater habitat where food is available. And because, despite their manifold adaptations, all insects are built on an easily recognisable basal plan, they offer unrivalled material for the study of evolution and thus of strategies that secure stability and long-term survival. As terrestrial animals ourselves, we can benefit from trying to understand these patterns of adaptation, either as object lessons should we wish to adopt such strategies ourselves, or as military intelligence should we wish to outwit those species of insects that we regard as pests.

During the rest of this talk I am going to share with you some personal reflections on each of these reasons for studying insects.

### Wonder and Delight

First, then, let us consider insects as sources of wonder and delight. Both of the experiences I am about to describe relate to dragonflies – creatures distinguished by their peerless command of flight; and both incidents relate to migrations, phenomena which must surely be among the most compelling that an entomologist can witness. The first of these two events took place in the tropics, almost exactly on the equator, near the north shore of Lake Victoria in Uganda; the second occurred in a north-temperate latitude, at about 42°N. in Point Pelee National Park, the southernmost tip of the Canadian mainland.

The incident in Uganda took place in 1962, shortly before I left that country to come to Canada. I knew from circumstantial evidence that several species of dragonfly, all of which bred in temporary waters, underwent regular long-distance flights as adults, travelling northwards and southwards across the equator with the rain-bearing winds; but I had never seen this happening, at least not in an unequivocal way. Late one afternoon I was standing in my garden looking straight up into the sky, straining to keep in sight a hawk that I had been watching, when I detected a moving speck, apparently not a bird, which, as I watched, appeared to grow larger. This speck was obviously very high above me. As I continued to watch, several and then many similar specks came into view and became progressively larger until I could make out that



they were dragonflies. With a surge of excitement I realized that I was witnessing the descent from a great height of a large migration. Before many minutes had passed, the first of the dragonflies had almost reached the ground, where they continued to fly steadfastly in one direction, at a height of a metre or so, rising to clear bushes and other obstacles standing in their path, the rustling of their wings filling the air as they flew by in the now failing light. As the sun set they chose their roosting sites — the bare tips of tree branches a few metres above the ground on western faces warmed by the setting sun. There was a noisy jostling as late arrivals tried to alight on perches that were already occupied. Then, as darkness fell, activity ceased, and I left my observation post for the night. I returned to it before sunrise the next morning. As the sky illumination increased during twilight, the dragonflies on their perches briefly fluttered their wings, whereupon one or two, then several, and then a tremendous wave of them took to flight. They climbed rapidly into the early morning sky until they once again became remote specks which soon disappeared from view. And the direction in which they departed was a continuation of the direction in which they had arrived the evening before, strongly suggesting that they were navigating by sun-compass orientation. That was the only occasion, during my eight years in the tropics, on which I witnessed the arrival and departure of a dragonfly migration.



In the early fall of 1965, and again in 1967, my wife and I visited the Point Pelee National Park, the peninsula that projects southwards into Lake Erie, where many insects, such as the monarch butterfly and several kinds of dragonfly, gather at that time of year, presumably on their way to Ohio and destinations further south. On some days the Park abounded with dragonflies and we were able to observe their roosting behaviour in the evening. There, as in Uganda, they settled on the western sides of bushes and trees, facing the setting sun. But in temperate latitudes in early fall such a habit presents difficulties if your timetable calls for an early start the next morning, because the nights can be cool and the western faces of bushes and trees are the last places to warm up after daybreak. This being so, Hildegard and I went back to these roosting sites just before sunrise the following morning to see how the dragonflies would cope. They coped very well. Just before sunrise, after a period of wing-whirring, presumably to raise the thoracic temperature, the dragonflies took off, darted around at great speed and almost immediately alighted again, but this time on the eastern faces of vegetation where in due course they would be warmed by the rising sun. Having made this adjustment, they remained motionless for a considerable time until the ground surface began to warm up; then they gradually moved downwards on their perches until some individuals were actually on the ground. Their brief, mercurial flight before sunrise had taken them from the coldest microclimate at Point Pelee to the warmest, and their early departure, after they had warmed up, was thereby assured. As we left the Park that morning and saw all these dragonflies sunning themselves on the eastern sides of trees we reflected on how puzzled we should have been if

we hadn't been around to witness the minute or two of frenzied flight in the half-light of dawn and to see how the trick was accomplished!

### Strategies for Survival

The second reason for studying insects that my colleague and I had recognised was to observe, and try to understand, their strategies for survival in a terrestrial environment. During the rest of this talk I shall discuss the implications that such studies may have for the survival of man.

Although man is the only species of animal that has evolved a substantial capability for thinking, looking ahead, planning, imagining and speaking, he seldom applies these aptitudes to considering the long-term goals of his own species. When he does do this, and in a serious manner, it is usually to conclude that a main objective should be to attain the continuing survival of human populations at an acceptable nutritional level and in healthy, congenial surroundings. To this objective he may sometimes add the provision that this survival should be achieved **without** wide-amplitude fluctuations in numbers and **without** major cultural discontinuities. Such a goal, we may note, is one that has been achieved by most extant species of insect from whose example, by the exercise of suitable humility, we should therefore be able to learn.

I suspect that there has never been a time in the history of man when it has been as necessary and as urgent as it is now to adopt a recipe for achieving stability of human populations. For just recently (**extremely** recently in terms of man's existence on earth) human populations in most parts of the world have exploded into what can only be called an outbreak — one that for its abruptness and extent has had no precedent on our planet. This outbreak is taking the form of an exponential rise in population and consumption powered by a rapid rise in productivity which, by positive feedback, provides the resource base on which the population and consumption can continue to grow.

It is important to note how recent this outbreak is. For about 99% of the time he has existed on earth (either as *Homo sapiens* or as his tool-making forebear, *Homo erectus*) man has apparently lived as a hunter-gatherer, regulated by the ecosystems of which he was a part and having little effect on them. Ecologically, this can be regarded as the typical human condition. During this time man could be likened to a satellite in stable orbit around the earth, held securely in its path by the interaction between its own centrifugal force and the earth's gravitational pull. But during the last 1% of man's voyage certain events have taken place which have culminated, during the last two hundred years, in this satellite breaking away from the earth's gravitational hold, and the stable course it was following, and then accelerating off into the unknown.

Sometimes populations of insects sustain an outbreak; this is particularly liable to happen if their food is grown in intensive monoculture. From our knowledge of insect populations we know that two conditions must exist for an outbreak to occur: first, the factors that normally cause mortality must be rendered less effective; and second, there must be available a rich substrate on which the population can grow. The behaviour of certain crop insects when their predators and parasites have been reduced in numbers serves to illustrate this generalisation. We observe also that an outbreak usually ends with an abrupt drop in numbers when the food source is consumed or harvested.

The same two conditions exist in the case of man's outbreak: the death rate has been greatly reduced, mainly by the science of preventive medicine; and the domestication of plants and animals has provided a rich substrate on which human populations can grow. As our entomology tells us, there are termites, beetles and ants that domesticate other organisms and yet do not sustain



fulminating outbreaks; so the practice of domestication itself would not seem to be a sufficient condition for instability. An important difference between the strategies of man and insects seems to reside in what man has done with this ability to domesticate other species. Further examination reveals that man's strategy has been significantly affected by two further developments, neither of which has a counterpart in any other organism.

First, the energy flux in agricultural systems has been accelerated tremendously by the injection of progressively greater amounts of fossil fuel. This has had the effect of greatly increasing the apparent productivity of such systems, albeit on a subsidy that has to be regarded as temporary, since fossil fuels are for practical purposes non-renewable. Use of this subsidy has provided the substrate on which the outbreak has been able to continue. Prolonging the outbreak has allowed the numbers to become very high and the residual productivity of the resource-base to become correspondingly low, thus rendering more difficult the accommodation that will have to be reached between the population and its resource-base when these temporary subsidies are withdrawn, and the outbreak is brought to an end.

Second, a system of trading has developed, whereby convertible tokens can be used as currency to acquire wealth. Since resources can be converted to currency, this development has contributed significantly to the speed with which certain resources are being depleted. Also such a system encourages patterns of resource utilisation that favour short-term profits at the expense of sustainable yields. It provides an effective way of accelerating consumption and encourages non-renewable resources to be used without restraint, and beyond the level at which they are actually needed to achieve comfort and survival.

From these reflections we may conclude that man's outbreak, and its persistence, have been largely due to the development of a high-energy technology and of trading, both of which seem to have been made possible by man's recently acquired powers of reasoning that have enabled him to devise methods for frustrating certain ecological regulating mechanisms to which he previously owed his stability. I suspect that, even if he had the option to do so, man would not now wish to relinquish his mental powers together with all the excitements and satisfactions they command. Rather, it appears, he must use these powers not to leave the prospect of stability yet further behind him, but instead to chart a course that will steadily improve his chances of regaining a stable condition or perhaps of building a new kind of equilibrium.

One lesson to be learnt from insects, many of which were accomplished at long-term survival millions of years before entomologists were thought of, is that no harm need come from domesticating plants and animals as long as the death rate is kept equivalent to the birth rate (at least in the long run) and as long as resource consumption is derived from income and not from capital.

The elements of this lesson have been known, and articulated, for a long time but so far there has been little indication that they are being reflected in policy or action. In a recent book, Ken Watt (1973) points out that time also is a resource insofar as the probability that an event will occur increases with the time available for it to occur. In the present context this reminds us that an action postponed beyond a certain point may be an action forgone or an option forfeited.

Already the human satellite has been speeding away from its stable orbit, accelerating steadily, for several doubling-times of the human population, while the pressure on the planet's diminishing resources becomes more and more intense. The chances of the satellite regaining stability, already small, diminish

for every day that remedial action is delayed. Already the extravagances of this generation have committed the next to a leaner and more crowded existence in a world of fewer choices.

As entomologists, we may be particularly well situated to generate awareness and to help to initiate remedial action. Not only are we intensely aware of the sources of wonder and delight that this world has to offer, but we can also see, on biological counts, where the imperatives for action must lie — towards reducing demand so that it does not exceed the sustainable supply and not (as is current practice) towards mortgaging future supply so that demand can continue to rise.

Since the first entomological societies were formed more than a century ago, humans have learnt a great deal from their study of insects and many have enjoyed themselves hugely in the process. If the two reasons that my colleague and I identified for studying entomology are going to remain applicable into the future, man will have to modify his strategy for living on this planet, and to do so very soon, while options remain for this to be done in an orderly and humane way.

In 1966, at the Nobel Conference held at Gustavus Adolphus College, St Peter, Minnesota, Kenneth Boulding (1967) concluded his talk with the following passage, which merits attention today even more than it did eight years ago. He said:

"The picture which I now have of man is that he is walking a tightrope over an enormous chasm to a promised land. I think there is a promised land, in the sense that built into the human organism itself there is a covenant, a promise which is capable of redemption. There is a state of the world which is much better than what we have now, which is both possible and achievable; but it is achievable only across the tightrope. We may fall off it, and this part of the universe will have to be written off as an unsuccessful experiment. Jiggling the tightrope is absolutely out; we need to concentrate all our energies on getting across this next dangerous hundred years, perhaps the most dangerous hundred years in the history of the planet. What lies on the other side, however, looks very nice; and being a human being, I can't help having some optimism about it. This is a lovely planet, and it deserves to fulfil its potential. I recommend it to you earthlings. Tend it with loving care."

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Courtesy of Mr. Robert Chambers and the Halifax Chronicle-Herald

# MINUTES

## TWENTY-FOURTH ANNUAL GENERAL MEETING



### ENTOMOLOGICAL SOCIETY OF CANADA

Dalhousie University, Halifax, Nova Scotia

28 August 1974

The President, John McLintock, called the meeting to order at 1545 hours. There were approximately 95 persons in attendance.

#### *Notice of Meeting*

A preliminary notice was published in the **Bulletin** 5(4), December 1973 and a fuller notice in the **Bulletin** 6(1), March 1974.

#### *Proxies*

None was declared.

#### *Deceased Canadian Entomologists*

The meeting paid its respects by one minute of silence to the memory of P. F. Bruggeman, Georges Gauthier, Brian Hocking, G. R. Hopping, Henry Hurtig, R. A. Wardle and Edna Mosher.

#### *Minutes of the Twenty-Third Annual General Meeting*

The minutes were adopted as published in the **Bulletin** 5(4), December 1973. Motion by W. Y. Watson and C. R. Sullivan. Carried.

#### *Business Arising*

**Changes in By-Laws:** At the meeting of the Governing Board, 19-21 February 1974, it was decided that a further simplification of the By-Laws should be made before submitting any changes to the membership for decision on the 1974 mail ballot.

**Fellowships:** The mechanism of choosing Fellows was approved by an almost 2:1 vote on the 1974 mail ballot.

**The C. Gordon Hewitt Award:** The award was approved by a more than 5:1 vote on the 1974 mail ballot.

#### *President's Report on Behalf of the Governing Board*

The President's Report was received on a motion by J. McLintock and P. S. Corbet. Carried.

#### *Auditor's Report*

The Auditor's Report was published in the **Bulletin** 6(2), June 1974 and additional copies of the Report were available at the meeting for the information of members.

## *Financial Recommendations from the Governing Board*

The following recommendations were presented to the meeting (written on the blackboard):

that effective 1 January 1975, annual dues for direct, active membership shall be twenty dollars (\$20.00) while those for active membership through an Affiliated Society shall be eighteen dollars (\$18.00).

that the annual subscription rate for *The Canadian Entomologist* shall be thirty-five dollars (\$35.00), effective 1 January 1975.

that the charge for publication in *The Canadian Entomologist* shall be forty-seven dollars (\$47.00) for each page, effective for all manuscripts received after 1 September 1974.

that the charge for the first 100 copies of reprints of papers published in *The Canadian Entomologist* shall be raised by approximately 5% and the charge for each additional 100 copies be raised by approximately 20%, effective for all manuscripts received after 1 September 1974. (See box page 94 for details)

that, effective 1 January 1975, the prices of back issues of *The Canadian Entomologist* shall be \$40.00 per volume, or \$4.50 per number.

that the overhead charge for the publication of *Memoirs* shall be 30%, effective on all manuscripts received after 1 September 1974 (this is a 5% increase).

It was moved by W. J. Turnock and D. E. McE. Kevan that all these recommendations be incorporated into a single motion. Carried.

It was moved by W. J. Turnock and W. D. Seabrook that all these recommendations be approved.

After questions and discussion, led by D. F. Hardwick, which were largely answered by the Treasurer and Chairman of the Finance Committee, an amendment to the motion was presented by R. P. Jaques and D. F. Hardwick that "effective 1 January 1975, annual dues for direct, active membership be twenty-five dollars (\$25.00) while those for active membership through an Affiliated Society be twenty-three dollars (\$23.00). This amendment was defeated.

The original motion was carried with only two negative votes.

## *Elections*

The Secretary reported that K. G. Davey, Convener, Election Committee, had informed him on 18 July 1974 that the successful candidates were George S. Cooper, President-Elect; and Jean-Jacques Cartier and James S. Kelleher, Directors-at-Large.

## *Installation of New President*

The Chairman invited C. R. Harris, the new President, to take the chair.

## *Installation of New Officers*

Dr. Harris introduced the President-Elect, the two new Directors-at-Large and J. B. Dimond, the new Regional Director representing the Acadian Entomological Society. (Later it was learned that J. H. Borden will be the new Regional Director representing the Entomological Society of British Columbia).

### *Auditors*

It was moved by E. C. Becker and W. A. Charnetski that Geo. A. Welch and Company, Ottawa, be re-appointed as Auditors. Carried.

### *Presentation of Service Award Shields*

The President paid tribute and presented Service Award Shields to the Past President, John McLintock; the outgoing Secretary, Douglas M. Davies; and the outgoing Editor, V. R. "Vick" Vickery.

### *Fourth Insect Photographic Salon*

R. A. Brust, Chairman, Insect Photo Salon Committee, announced the awards. (See page 92)

### *Appointments and Committee Chairmen and Vice-Chairmen*

The President, C. R. Harris, announced the officers, and chairmen and vice-chairmen of committees. (The full list is published on page 98)

### *Resolutions:*

It was moved by R. W. Fisher and B. J. R. Philogène that the following resolutions, prepared by the Resolutions Committee, R. W. Fisher (Chairman), W. A. Charnetski and P. Harris, be adopted.

1. Whereas the Receptions and Conventions Bureau, the President's Office, and Dalhousie University have provided excellent facilities for the Professional and Social activities of the Entomological Society of Canada for its 24th meeting, be it resolved that this Society extend thanks to them.
2. Whereas the Acadian Entomological Society has arranged for excellent facilities and a stimulating program for this joint meeting, be it resolved that the Entomological Society of Canada commend and warmly thank the Acadian Entomological Society for their efforts on our behalf.
3. Whereas the success of this meeting was made possible by the joint and individual efforts of many people, be it resolved that the Entomological Society of Canada thank all those who contributed.
4. Whereas the Government of Nova Scotia has honoured the Entomological Society of Canada by providing a special lobster supper, be it resolved that this Society express its pleasure. Carried unanimously.

### *Twenty-Fifth Annual General Meeting*

The Secretary announced that the Society would meet with the Entomological Society of Saskatchewan, Canadian Botanical Association and the Canadian Phytopathology Society in Saskatoon on 17-21 August 1975. The Chairman of the 1975 Program Committee is Peter Harris. (Later it was learned that the International Northwest Conference on Diseases of Nature Communicable to Man would be meeting at the same time and place in 1975 adding further diversity of interest for our members).

### *Remarks of Secretary of the Biological Council of Canada*

Dr. R. G. Bidwell, Secretary, BCC, was introduced by J. A. Downes. Dr. Bidwell said that the recent activities of the BCC had been reported in their Newsletter and in ESC reports. He mentioned the disquieting statistic that the average age of entomologists in Canada was 54 years. He drew attention to the small increase in the NRC budget,

approximately 1.5% in the last six years, which reflects really a 50% decrease in support because of inflation. He remarked that the Government appears to be playing down science in Canada. He pointed out the large amount of volunteer time donated by the BCC executive (including most of Dr. Walden's sabbatical leave). He considered that there is better hope now, than a few months ago, for an increase in the number of active scientists taking positions on government granting and advisory councils and committees. The BCC is trying to promote such action in MOSST and Science Council. At the moment most who make decisions regarding the development of science in Canada are not scientists nor do they have much, if any, contact with the bench scientist.

#### *Thanks to Last Year's Executive*

It was moved by A. J. McGinnis and W. A. Charnetski that the thanks of the members be extended to last year's Executive. Applause indicated general agreement.

As there was no further business, the Chairman adjourned the meeting at 1700 hours.

## ACTIONS OF THE GOVERNING BOARD

### 25-26 August 1974

- |                   |   |
|-------------------|---|
| Biological Survey | 1. Approved an ad hoc committee to promote the Biological Survey of Insects in Canada comprising J. A. Downes (Chairman), D. K. McE. Kevan, E. G. Munroe, and, for the BCC, J. Aldous.  |
| Manpower          | 2. Supported the idea of a Manpower Study to begin as soon as possible.   |
| Achievement       | 3. Empowered the Executive Committee to act as an Ad Hoc Committee on Canadian Achievements in Entomology to compile a list of Canadian entomologists (with documentation) who have made outstanding contributions to entomology and forward this material to the Ministry of State for Science and Technology as requested. Material on our Gold Medalists has already been submitted. |
| N.R.C.            | 4. Asked the President to appoint an ad hoc committee to prepare a list of members from which Society representatives could be chosen for NRC or NSRC grant selection and advisory committees.  |
| Annual Meetings   | 5. Approved "that an annual meeting of the ESC without participation of a Regional Society be held at intervals of several years in place of the usual joint meeting (which would be postponed one year), preferably in Ottawa" and "that the appropriate Regional Director be chairman (or at least a member) of the program committee for each joint meeting".                        |
| Can. Ent.         | 6. Requested that the Editorial Board and Finance Committee explore less expensive means of publishing <i>The Canadian Entomologist</i> .   |



7. Agreed that no more than 50 pages or 4% of a volume may be allocated to papers (in *The Canadian Entomologist*) with waived page charges.
8. Agreed that authors, who are delinquent in paying page or reprint charges, be billed again and that, if payment is not made within 2 months, they lose publication privileges in *The Canadian Entomologist*, until past debts are settled.

Finance

9. Approved or modified recommendations of the Finance Committee for reducing expenses and increasing revenues to achieve a balanced budget (see motions approved in minutes of Annual General Meeting of 28 August 1974).

Archives

10. Approved that appropriate archival material from the Society's Archives be deposited in the Public Archives of Canada for a 5-year period. Other material may go to the National Library and the National Museum of Canada.

Science  
Policy

11. Supported the following recommendations of the Science Policy Committee that were forwarded to MOSST (Ministry of State for Science and Technology) scientific and technological associations committees for consideration and discussion.
  - a) that the House of Science and Technology (HOST) should be primarily a physical setting.
  - b) that the terms of reference for HOST should include statements which indicate that the continuous danger of setting up power centres and controls should be strongly resisted.
  - c) that HOST should be the servant and not the master of its constituent societies.
  - d) that HOST should have its own management which should be entirely separated from the executive and administration of SCITEC but which would report to SCITEC.
  - e) that with respect to financing, the HOST building be financed by a grant from Parliament, but that the societies themselves should finance their own administrative expenses and that the societies themselves might be subsidized independently by the government.
  - f) that non-residents in HOST should pay less, i.e., there should be a differential fee scale for societies according to the amount of facilities provided to them by HOST.
  - g) that the Society should maintain full control of its own journal, that, if any grant is obtained, it should come directly to the Society, and that, as far as the Society is concerned, there is no need for a centralized publishing system.
  - h) that SCITEC is the single voice on matters on which Societies can agree. These matters may be:



- i) matters of general consensus
  - ii) matters of interest to a sector (e.g., life sciences or social sciences) to which SCITEC will lend its agreement, authority and support.
  - iii) matters similar to those in ii) but of interest to a single Society.
  - i) that SCITEC will define and emphasize the needs and problems of disciplines and will recognize that a particular policy or machinery that is good for one discipline or field may be bad for another.
  - j) that SCITEC will not interfere with the right and duty of sectors and societies to deal with problems in their own sphere.
  - k) that financial assistance to societies should come directly and not through an umbrella organization.
- Fellowships      12. Requested the Secretary to ask certain Honorary Members and past Presidents to act on an Interim Fellowship Selection Committee (composition will appear later in the **Bulletin**).
- Scholarships      13. Asked that the Ad Hoc Scholarship Committee be asked to prepare a plan on how the Scholarship program should be administered.

## ACTIONS OF THE GOVERNING BOARD

29 August 1974

- Managing Council      1. Approved the Managing Council: E. C. Becker, Treasurer; D. M. Davies, Secretary until 31 December 1974 and N. S. Church beginning 1 January 1975; V. R. Vickery, Editor until 15 September 1974 and P. E. Morrison after that date.
- Committees      2. Approved the Presidential appointments of Committees and Representatives, and re-organization of the Science Policy Committee.
- Achievement Awards      3. Approved the appointment of the auditors to the 1975 Achievement Award Committee and agreed that the deadline for submission of nominations for the Gold Medal and C. Gordon Hewitt Awards be 30 November 1974.
- By-Laws      4. Agreed that the Ad Hoc Committee, comprising J. A. Downes (Chairman), M. Ellen MacGillivray and D. C. Eidt, be reappointed to complete the revision of the By-Laws, and Rules and Regulations including terms of reference of officers and committees.
- Biological Survey      5. Agreed to pursue the matter of the Biological Survey of Insects in Canada with vigour and to secure advice from the members of the Society.

- |                        |   |
|------------------------|---|
| Extension              | 6. Approved a study of the flow of information in the Research - Extension - Producer relationship and the appointment of an Ad Hoc Committee to expedite this study.   |
| Science Policy         | 7. Suggested that the Science Policy Committee might sponsor a Special Interest Group at the next annual meeting.   |
| Annual Meetings        | 8. Noted that plans for the 1975 Annual Meeting in Saskatoon are progressing well.  |
|                        | 9. Noted that the 1976 Annual Meeting will be held jointly with the ESO at the University of Waterloo, Ontario. The August meeting of the International Congress of Entomology in Washington, D.C. will be kept in mind.                                  |
| Publicizing Entomology | 10. Requested the Committee for Publicizing Entomology to look into the matter of using a professional science writer for writing popular articles in entomology.   |
| Can. Ent.              | 11. Requested the President to write the Director-General, Agriculture Canada, advising him of the refereeing system used by <b>The Canadian Entomologist</b> and ask that this publication be added to the Agriculture Canada list of refereed journals. |

### HONORARY MEMBERS

The Honorary members of the Society are R. E. Balch, E. M. Duporte, G. P. Holland, W. N. Keenan, G. F. Manson, A. D. Pickett, J. G. Rempel and H. H. Ross.

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

Submissions, accompanied by supporting statements, should be sent to the undersigned by 1 January 1975 at the latest, for forwarding to the Committee. Previous submissions will not be considered by the Committee unless they are resubmitted.

Douglas M. Davies, Secretary,  
Department of Biology,  
McMaster University,  
Hamilton, Ontario L8S 4K1

**WILLIAM ELGIN VAN STEENBURGH**  
**O.C., O.B.E., E.D., B.A., M.A., Ph.D., LL.D.**  
**1899 — 1974**



"Dr. Van", as he was affectionately known to his colleagues, "Van" to his friends, was born on Christmas Eve, 1899, at Havelock, Ontario, and died on Easter Sunday, 1974, at Ottawa. A natural leader of men, he compiled a distinguished military record and materially influenced the development of research in Canadian agriculture, forestry, mining and oceanography. A man who got things done, his sometimes blunt manner only thinly concealed his genuine concern for his fellow workers.

Van's youth was spent in mining communities in the United States where his father served as mining engineer. In his teens he took summer jobs in mines and by his mid-twenties became Superintendent of the development aspects of a coal mine in West Virginia. In this way he gained a practical background in mining that served him well thirty years later.

His elementary education was obtained in various localities in the United States. Later he attended Greenville Preparatory School in Illinois, then Greenville College where he earned his B.A. degree in 1923. After a year at Queen's University, Kingston, Ontario, to acquire the equivalent of honour standing in a Canadian university, he entered the Graduate School of Zoology at the University of Toronto where he obtained his M.A. in 1927 and his Ph.D. in 1931.

Dr. van Steenburgh's career in the Public Service of Canada fell broadly into three periods: 1927 — 1939 in entomological research with the Division of Entomology, Canada Department of Agriculture; 1939 — 1947 in military service and defence research activities; and 1947 — 1968 in senior civil administrative posts.

His entomological work began in 1927 in a temporary Junior Entomologist's post at Chatham, Ontario. In 1928, as Assistant Entomologist, he switched to biological control investigations at the same institution and in 1929 continued on similar work at the Dominion Parasite Laboratory, Belleville. He remained at Belleville until late in 1938 when he was appointed Officer-in-Charge of the Dominion Entomological Laboratory at Harrow, Ontario, as part of the Fruit Insect Investigations Unit.

Van's research centred on the colonization in Ontario of *Macrocentrus ancylivora* Rohwer, a parasite of the oriental fruit moth. This work led to the successful introduction of the parasite at a time when the peach crop was being seriously threatened. A paper on the subject was published in April 1930, in *The Canadian Entomologist*. He laughingly referred, years later, to the task he set himself of stripping every leaf from a mature peach tree to get a reliable picture of pest and parasite abundance and distribution — a tedious exercise for a man of action. As events were to prove, Van's impact on entomology was to come through his broader contribution to the provision of research facilities and research administration rather than through personal research.

Always a staunch supporter of the Armed Forces, Dr. van Steenburgh joined the Militia in 1934 as a Gunner. From 1937 until the outbreak of World War II, he commanded the 34th Field Battery, R.C.A., at Belleville. In 1938, this Battery won the Governor-General's Prize for general efficiency. In 1940, he mobilized a Light Anti-Aircraft Battery; in 1941, commanded a Light Anti-Aircraft Regiment; in 1942, took charge of the Advanced Artillery Training Centre at Petawawa; in 1943 became Director of Artillery for Canada; and from 1944 until the end of hostilities was Director of Armament Development at National Defence Headquarters. Through this progression he finally assumed responsibility for research and development on new weapons, radar, explosives and propellants and was ultimately placed in charge of the construction and development of the Canadian Armament and Development Establishment at Valcartier, Quebec. Late in 1946, he was assigned to the Canadian High Commissioner in London, England, as Special Scientific Adviser for the Defence Research Board. For his military services he was decorated with the O.B.E. and E.D. He retired from the army in 1947, with the rank of Colonel, to return to the Canada Department of Agriculture.

Dr. van Steenburgh reported back to Agriculture at a propitious time. Dr. K. W. Neatby had recently become Director of Science Service at Ottawa and was embarking on an epoch-making recasting of research policy and facilities, including considerations affecting forest entomology and forest pathology. He immediately appointed Dr. van Steenburgh as his Research Adviser and in 1949 raised his status to that of Associate Director of Science Service, a post Van held until he left the Department in 1956. During this dynamic period, Van's responsibilities centred on the provision of urgently needed research laboratories and institutes and on the streamlining of the administration function in the Service.

In less than a decade, Van directed the designing and construction of some 25 research buildings. These were located from coast to coast and covered such diverse functions as agricultural science, forest biology, fumigation, pesticide testing and experimental greenhouse structures. In addition he strongly influenced the development of a comprehensive biographics service and the establishment of regional libraries strategically located to serve the field staff. These developments, together with the gradual formation of a well qualified and experienced engineering/architectural unit at headquarters, brought international recognition to Science Service and the Department as a centre for research laboratory design.

During this period, excellent facilities were built for the pursuit of entomological research, in both its basic and applied aspects. Laboratories for the investigation of pests attacking field crops, fruits, and forests were integral components of multi-discipline regional research centres strategically located across the country. In addition, comprehensive facilities were provided for research in depth on pesticides at London, insect pathology at Sault Ste. Marie, biological control at Belleville; on a smaller scale for stored product insects at Winnipeg and livestock insects at Lethbridge; and on insect taxonomy at Ottawa through the doubling of the space available for the Canadian National Collection of Insects. Canadian entomologists are truly grateful for this legacy.

In 1956, Dr. van Steenburgh transferred from Agriculture to the Department of Mines and Technical Surveys. As Director-General of Scientific Services (status of Assistant Deputy Minister) he assumed responsibility for directing and coordinating the Department's scientific programs and in particular for identifying and blueprinting major projects worthy of further development. Here he added to his already prestigious record by spearheading the establishment of the

long-term Polar Continental Shelf Project to assess the resources of this Arctic area; by stimulating the federal government's participation in the Upper Mantle Project to procure basic data required by the mineral industry; and by promoting Canadian activity in oceanography. In pursuance of the last objective, he re-organized the Canadian Committee of Oceanography, inaugurated a five-year program of expansion, formed a new Marine Sciences Branch in the Department, and established The Bedford Institute of Oceanography at Dartmouth, Nova Scotia. As expected, he was a member of several scientific organizations and also served on innumerable committees, including the Chairmanship of the Canadian Committee on Arctic Research in which he took a vital interest.

This impressive performance led, in 1963, to Dr. van Steenburgh's promotion to Deputy Minister, Department of Mines and Technical Surveys, a post he held until his "first" retirement in 1966. In this period, he focussed on improving the organization of the Department, including the creation of a Water Research Branch and the initial steps to provide a counterpart of the Bedford Institute on the West Coast.

In 1966-67, Dr. Van spent a year as Special Scientific Adviser to the Privy Council Office. Then he returned to Mines and Technical Surveys in a consulting capacity, taking his final retirement in 1968.

Dr. van Steenburgh's contributions to Canadian science have been signally recognized. In 1962, Dalhousie University conferred on him an Honorary L.L.D. degree; in 1963, the Professional Institute of the Public Service of Canada awarded to him their highest honour, the gold medal; in 1967, the Governor-General of Canada bestowed on him the Medal of Service (now designated "Officer of Canada") of the Order of Canada; and in 1974, his achievements were recognized, posthumously, through the hanging of his portrait in the Bedford Institute of Oceanography to commemorate his role in the Institute's formation.

During his college days, in 1922, Van married Lydia Irene Miller of Ottumwa, Iowa, who continues to live in Ottawa at 2625 Regina Street, Apartment 1203. Their son, William Elgin, also lives in Ottawa, while their daughter, Sylvia Joan (Mrs. John Wiggins), resides in Willowdale, Ontario. Over the years, Van and his family kept closely in touch with the Havelock district, regularly spending summer holidays at their cottage on Belmont Lake. For them and all of us who knew Van, a host of pleasant and fascinating memories remain. But the superb research facilities that he succeeded in providing for Canadian scientists, present and future, serve as his own lasting memorial. We are all in his debt.

Robert Glen

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## CANADIAN ENTOMOLOGIST 100 YEARS AGO

In the description of this species I have used the word "before" where I should have written "behind," as to the location of the costal streak; and the whole description is so unsatisfactory that I wish to redescribe it. It is, however, difficult to get a good description of a species which does not present the same appearance in any two views of it. 6:152.

*Excuses, excuses!*

## GOLD MEDALLIST PREBBLE RETIRES

On 7 June 1974, a reception was held in Ottawa to mark the termination of Dr. Malcolm L. Prebble's life-time career in forestry. Both Dr. and Mrs. Prebble were the recipients of many appropriate mementoes, including a citation signed by the Prime Minister of Canada.



Dr. Prebble was born in Saint John, New Brunswick, in 1909. He received his secondary education in that city, and his academic achievement started early in life. He was granted a scholarship upon graduation from the Saint John High School, from which he proceeded to the University of New Brunswick. Then he won academic awards in his first and third years in forestry, climaxed by receiving the Governor General's Medal in 1930 upon graduation with a B.Sc. degree in forestry. Then followed a decade of work and study that led to M.Sc. (1932) and Ph.D. (1940) degrees in entomology from McGill University.

Dr. Prebble's forestry career started in 1927, when as a student he worked on a reconnaissance survey for the New Brunswick International Paper Company in northern New Brunswick. The following summer he worked at the Dominion Entomology Laboratory in Fredericton. His association with that laboratory, although discontinuous, lasted until 1940. Most of this period was devoted to research on the ecology of the European spruce sawfly in the Gaspé and the Maritime Provinces.

In 1940 Dr. Prebble was transferred to Victoria, B.C., to organize a regional laboratory of forest entomology. He was expected to find headquarters accommodations for himself and staff (total of two) at no cost to his department. He was successful. The British Columbia Forest Service provided laboratory and



office space consisting of a 16' x 18' room in the rear of a paint shop on Superior St. The space was adequate for the first few years despite the distractions caused by the frequent passage of workmen through the room, which provided the only access to the toilet. Whilst in B.C. Dr. Prebble worked primarily on Vancouver Island and coastal regions of the Mainland, with emphasis on problems of direct interest to the B.C. Forest Service and to some of the larger forest industry companies. Because of this experience he was called upon to contribute briefs to two Royal Commissions on Forestry in B.C.

In the 1940's the Province of Ontario was concerned with a major spruce budworm outbreak, and an agreement was reached whereby the Government of Canada would provide forest entomologists to study this and allied problems and the Province would provide laboratory space for the researchers. Dr. Prebble was called upon to head this laboratory in 1945, and from that year to 1952 he developed a strong research program and staff for entomological studies in Ontario.

Dr. Prebble was transferred to Ottawa in 1952 to succeed Mr. J. J. de Gryse as Director of the then Division of Forest Biology, which encompassed forest insect and forest pathology investigations within the framework of the Canada Department of Agriculture. This situation lasted until 1960, when the Department of Forestry was formed by the amalgamation of units from the Departments of Agriculture and Natural Resources. At that time, 1960, Dr. Prebble became Director of the Forest Entomology and Pathology Branch, one of the four branches concerned with research and operations as activities of the new department. In 1965 these four branches were brought together under one unit, then identified as the Canadian Forestry Service, within the Department of Forestry and Rural Development. Dr. Prebble was appointed Assistant Deputy Minister responsible for integrated forest research programs. He continued to serve as Assistant Deputy responsible for forestry following still another reorganization that featured bringing together forestry and fisheries in 1968. When the Department of the Environment was created in 1971 Dr. Prebble's responsibilities as Assistant Deputy Minister were enlarged to cover forests, lands, and wildlife. Dr. Prebble's influence in Ottawa, especially from the early 1960's placed forest entomological and pathological investigations more fully into an overall forestry context so that these sciences played their full part in the analysis of problems that so frequently embrace all aspects of forestry.

In 1973 Dr. Prebble accepted his last position as Special Advisor to the Minister. He spent his last few months in this capacity to organize and edit a well illustrated, multi-authored book on the history of forest spraying in Canada from the year 1927.

Dr. Prebble has been active in a number of national and international organizations. He was president of the Entomological Society of Canada during the period 1958-59, and he chaired the joint meeting of this Society and the Entomological Society of America held in Detroit in 1959. He has also held membership in the Association of Registered Professional Foresters of New Brunswick, the Ontario Professional Forester's Association, the Canadian Institute of Forestry, and the Working Group on Forest Insects and Diseases (a component of the North American Forestry Commission, FAO). He worked as diligently for these organizations as he always did for the government departments he served, and it is fitting that in 1965 he was the recipient of the Entomological Society of Canada Medal for outstanding achievement in Canadian entomology. In granting this award the Society recognized Dr. Prebble's personal achievement in the application of statistical methods to the evaluation of biological systems, morphological and taxonomic studies, and his study of diapause and population ecology of the European spruce sawfly. The Society also

recognized Dr. Prebble's leadership role over strong elements of insect pathology, bioclimatology, insect genetics, cytology, and forest spraying against insects. The Society stated that world recognition of the regional forest biology laboratories testify to Dr. Prebble's remarkable ability as a research director.

Some people wonder how Dr. Prebble will adjust to the presumed slower pace of retirement, but unquestionably his hobbies will keep him fully occupied. His principal hobby over the years has been hard work of a physical nature, such as climbing the highest peaks of the Shick Shocks, building hurricane-proof cottages, and growing delectable fruit and vegetables. These and other activities will continue to occupy his time, and friends will continue to savor the Prebble's hospitality in Manotick, Ontario, where their residence is only a fly-rod cast from the picturesque Rideau River.

W. A. Reeks

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## BOOK REVIEW

**Cone and Seed Insects of British Columbia.** A. F. Hedlin. 1974. Published by Pacific Forest Research Centre, 506 West Burnside Road, Victoria, B.C. Paper cover, 63 pp. 40 Figs.

This handbook is intended as a guide for use by anyone interested in the insect problems associated with the production of tree seed in British Columbia, a purpose which it seems designed to fulfill most admirably. There are 20 genera and 33 species of the more important cone and seed insects included in the handbook.

The material is arranged throughout according to the tree, or genus of tree, on which the insects occur. Under each subheading, a key to the larvae of the cone insects and damages associated with particular species of trees is given, followed by a full description of the damage caused. Descriptions of the adult insects, notes on their life histories, and literature references are given. The distribution of each species is illustrated on a map of British Columbia.

The professional systematist may find the descriptions of the larvae in the keys rather oversimplified but field workers may appreciate this simplicity, and find them easy to use.

The photographs are numerous and excellent, and include a fine colour plate and frontispiece.

This handbook is bound to be interesting and useful to all those concerned with tree seed production in British Columbia and elsewhere, and a model for regional handbooks on the subject.

C. Yoshimoto

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## RECENT REPORT

Science Council of Canada, Annual Report for 1973-74. 37 pp. Information Canada, Cat. No. SSI-1974.



## BOOK REVIEW

**Insects in Relation to Plant Diseases.** Second Edition, by Walter Carter. Pp. XIV + 759. John Wiley & Sons. 1973. \$37.35.

The thousands of researchers, extension workers, teachers and students who regularly use the 1962 edition of Dr. Carter's book will be pleased to find that he utilized the same style and arrangement in this edition. In fact, most of the first book is repeated verbatim in this one. As with the first edition, the objectives are to provide a textbook for graduate students and a reference source for the whole field of transmission of plant diseases by insects. These objectives may have been fulfilled in the first edition, but it is doubtful whether many readers will be satisfied with the minor revisions in the second edition to adequately cover the vast number of papers that have been published on this subject during the past decade.

The first part of the book is concerned with plant pathogens transmitted by insects. A new chapter on the *Mycoplasma* has been added to this section. This is well written and gives an accurate account of the progress made since Japanese workers first detected mycoplasma-like bodies in tissues of infected plants in 1967. The inclusion of the chapter gives the impression that the book is up-to-date. The author cites the many reviews that have already been published and includes a table listing 61 plant diseases in which mycoplasma-like bodies have been shown to occur; but there is no mention of vectors. Considering the title of the book, this is a surprising omission. Throughout the remainder of the text, no further reference is made to mycoplasma. The author has elected to retain the terminology of the 1962 edition and lump the mycoplasma-like organisms with the plant viruses.

Part two of the book is devoted to toxicogenic insects and phytotoxemia. Information in this section has been up-dated somewhat. Since Dr. Carter's own research career was devoted to these subjects this section is authoritative and well prepared. Unfortunately, the chapter on the feeding processes of hemipterous insects and their salivary secretions has not been revised to include recent studies on the structure and function of leafhopper and aphid stylets.

Part three, which is more than half of the total, is devoted to plant viruses. Of the 7 chapters in this section, only 3 are concerned with the subject of the book, namely, insects in relation to plant diseases. The remaining 4 chapters are devoted to the virus entity, modes of transmission other than insects, symptomatology and control. There is some justification for including a broad overview of the field of plant virology but only if the vector aspects are emphasized. This has not been done. For example, 10 pages are devoted to transmission through seed but less than one page to transmission through soil. This would be the place for a good discussion of nematode transmission, a subject that has been extensively investigated during the past decade; but there is only brief mention of nematode vectors. Indeed, they are coupled with slugs, snails and sparrows in one short paragraph. The discussion of thrips transmission is also inadequate. In the short section on thrips are two paragraphs: the first states that thrips are a peculiarly limited group of vectors in that they transmit only one plant virus; the second contradicts this statement.

The virus-vector lists, which were so useful for reference purposes in the first edition, are a disappointment here on two counts. First, there is a chronological division, one table duplicating the lists that were in the 1962 edition and a second table listing records that have appeared since. This illogical separation seriously detracts from the usefulness of the tabular material. It may

even have been unintentional since the author, in introducing the lists, states that newly described vectors have been placed in a new combined table. The second disappointment is in the confusing naming of the vector species. The author points out that Kennedy et al. (1962) have published an authoritative conspectus of aphid vectors, embodying current concepts of aphid taxonomy, but unfortunately he does not adopt their names in his virus-vector lists.

R. Stace-Smith, N.S. Wright

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## BOOK REVIEWS

**Recherches acridiennes à Madagascar**, Institut National de la Recherche Agronomique, Paris, Publ. 72-5, 262 pp. (December, 1972). 80.00 fr., paper cover.

This publication is a collection of six theses prepared by students registered with the Laboratoire d'Entomologie et d'Ecophysiologie experimentales, Faculté des Sciences, Sorbonne, 91 — Orsay, Paris, based upon work carried out concurrently and cooperatively through the National Institute for Agronomic Research at Station acridienne, Betioky-Sud, Madagascar during 10 months of 1969 and 1970. Each of the six researchers studied some aspect of problems concerning acridid grasshoppers in Madagascar. A foreword by Biliotti and introduction by Le Berre precedes the six papers, which are written for publication rather than in 'thesis style'. Each report has an English summary.

J. F. Duranton (pp. 15-54) made a phytosociological study of natural habitats of *Locusta migratoria capito* Saussure at two types of localities in south-western Madagascar.

M. Launois (pp. 55-116) studied ovarian function of *L. m. capito* in the natural state.

H. Launois-Luong (pp. 117-158) studied the influence of adult conditioning (particularly by food sources) on reproduction of *L. m. capito*.

J. Andrianasolo Ravoavy (pp. 159-188) reported on embryonic, nymphal and adult development of population of *Gastrimargus africanus* Saussure and *Cyrtacanthacris tartarica tartarica* L., two acridid species which are secondary in importance only to *L. m. capito*, and which cohabit with that species on the Betioky plateau of Madagascar.

A. Louveau (pp. 189-224) studied effects of climate on development on *L. m. capito* on the Horombe plateau.

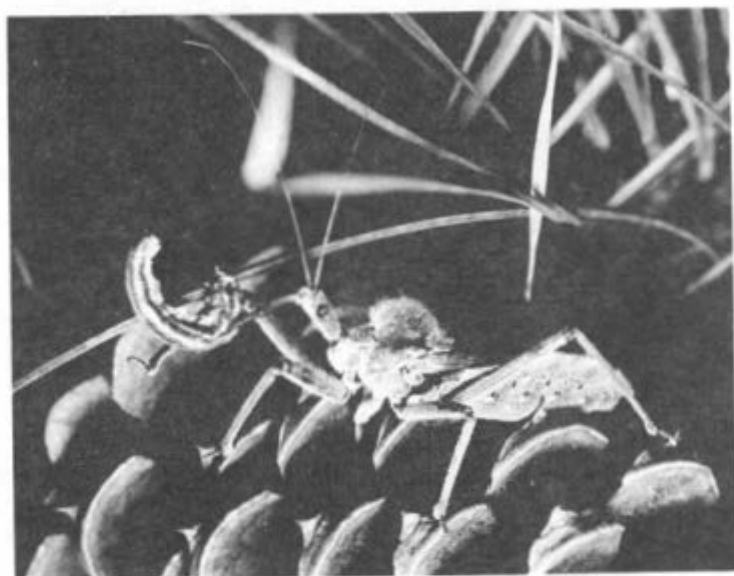
M. Lecoq (pp. 225-262) studied movements of adult populations of *L. m. capito* in the field.

Each of the reports is well documented and each forms a distinct but well integrated part of the results of the research on the important grasshopper pests of the area.

Concerted studies of the type reported here are highly recommended. They could provide answers to some of our more pressing insect problems more quickly than the present individual, rather haphazard, approach which seems to be all too prevalent.

V. R. Vickery

1974 PHOTO SALON  
BLACK AND WHITE

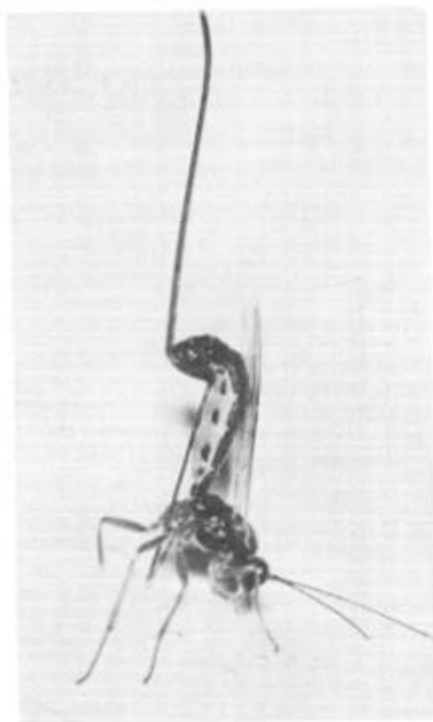


First: *Arilus cristatus* (Linn.) with captured sawfly larva by  
Ronald F. Billings, Lufkin, Texas.



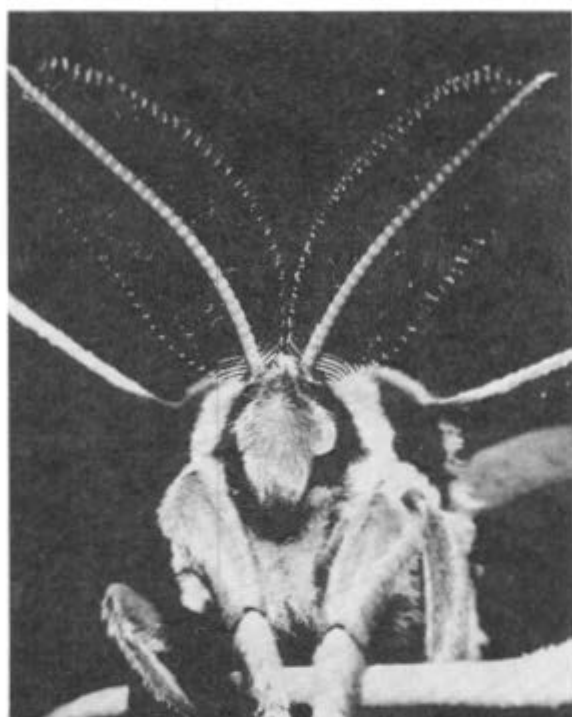
Second: *Spider* by S. Keller, Duebendorf,  
Switzerland.

Third: *Ichneumonid* *Ephialetes* with  
ovipositor inserted by S. Keller,  
Duebendorf, Switzerland.



# 1974 PHOTO SALON

## COLOR



First and Best in Salon: *Male cecropia* by J. W. Mertins, Madison, Wisconsin.



Second: *Swallowtail* by Gordon S. Glen, Saskatoon, Saskatchewan.



Third: *Bertha armyworm larvae hatching from eggs* by Reg W. Sims, Winnipeg, Manitoba.

## NOTICE TO AUTHORS

Page charges for the *Canadian Entomologist* have been raised to \$47 per page effective for all manuscripts received after 1 September 1974.

The cost of reprints, effective 1 January 1975 shall be as follows:

Pages	1-4	5-8	9-12	13-16	17-20	21-24	25-28
First 100	\$34	\$49	\$66	\$85	\$110	\$136	\$167
Additional 100's	\$11	\$15	\$18	\$22	\$ 25	\$29	\$ 33

The overhead charge for the publication of *Memoirs* shall be 30% effective on all manuscripts received after 1 September 1974.

## YOUTH ENCOURAGEMENT

*Excerpt from the report of the commendably active Committee of Youth Encouragement in Entomology of the Entomological Society of Manitoba, Terry Galloway, Chairman, August 1974.*

Our Committee began with a meeting of young people who had purchased insect collecting kits the previous year. On February 23, 1974, 50+ of these students, some interested friends and parents gathered at the Museum of Man and Nature Demonstration and instruction was given on where to collect insects, how to collect them once you find them, how to mount them, and on some of the basics of insect identification. There was also a slide-tape demonstration that covered the variety of the insect world. The students had been encouraged to bring any specimens which they had collected up to that time. About 10 of them brought along what they had, and we discussed some of their problems and some of their triumphs with them, as well as suggesting ways in which their pinning and labelling techniques could have been improved. Most of those in attendance showed a great deal of enthusiasm and some, at least, had had quite a lot of experience in the field.

In an attempt to promote the interest of young people in entomology, we initiated a province-wide insect collecting contest to commemorate Winnipeg's centennial year. The collection had to be made up of 100 insects collected in Manitoba during 1974. Although judged on organization, pinning and labelling techniques, and accuracy of identification, it was our hope to get the kids out into the field and to learn from their observations. Out of 54 entries, 27 were girls and 27 were boys aged 8 to 16, grades 2 to 11, from many parts of the province. Most entries were received from grades 5-7, ages 10-12. In the promotion of our contest, the members of the Committee put themselves at the disposal of the teachers to give in class, talks on insects and insect collecting. In all we gave about a dozen presentations, all of which were within the city of Winnipeg.

In early May, we took part in the Manitoba School Science Symposium held at the University of Winnipeg. There we displayed collecting equipment such as light traps, nets, pitfall traps, pins, killing jars, etc. In addition there were live insects including an ant colony, mosquitoes, a frame of bees, and

numerous stored product insects. Two excellent films on honey bees and bee behaviour were an added attraction. Also on display were both native Manitoba and exotic insects.

Immediately following the symposium, we worked in conjunction with the Museum of Man and Nature to set up an entomological display at the Polo Park shopping mall. Much of the display consisted of material from the symposium material, but some live material as well as numerous books on entomology were added. Over the five days of the display, the tables were rarely without interested and curious observers. From the number and type of questions that were asked and from the nature of the discussions which followed, it appears that most people are interested in insects and want to learn more about them.

## SCITEC COMMITTEES

*Anybody interested in serving on any of these committees, please contact Dr. John McLintock Apt. 1012 Victoria Place, 606 Victoria Ave., Saskatoon, Sask., S7N 0X2*

- I. **Operational Committees** – Specified in the By-Laws
  - Finance (honorary treasurer) – Dr. J. J. Green
  - Eligibility (honorary secretary) – W. Henderson
  - Constitution & By-Laws (honorary secretary) – W. Henderson
  - Election (past-president) – Dr. V. I. Douglas
- II. **Development and New Initiatives Committees** – Appointed from time to time by Council.
  - Ways and Means (explores means and ways to obtain financial support for SCITEC particularly from business)
    - Chairman: Mr. W. G. McKay, Underwood McLellan & Associates Limited, 1479 Buffalo Place, Winnipeg.
  - Individual Membership (directs the campaign for individual members)
    - Chairman: Mr. J.-L. Meunier, National Research Council of Canada, Ottawa, Ont.
  - Society Liaison & Communications (stimulates and improves communications and understanding with societies and with SCITEC members and the public)
    - Chairman: Dr. V. I. Douglas, Dept. of Psychology, McGill University, Montreal, Que.
  - House of Science & Technology (HOST) (pursues the implementation of a House of Science & Technology)
    - Chairman: Dr. M. P. Bachynski, RCA Limited, Ste. Anne de Bellevue, Que.
  - Environmental Affairs (conducts activities, including symposia, related to environmental affairs)
    - Chairman: Vacant.
  - Forums & Symposia (plans subjects and nature of future forums and symposia)
    - Chairman: Dr. D. Walden, Dept. of Plant Science, University of Western Ontario, London, Ontario
  - Planning & New Projects (suggests and explores new initiatives which should be pursued)
    - Chairman: Dr. P. A. Forsyth, Centre for Radio Science, University of Western Ontario, London, Ontario.



## GEORGE REDSTONE HOPPING 1899-1974



George R. Hopping passed away at age 75, in Victoria 30 March 1974 following a lengthy illness. Born in Kaweah, California, in 1899, George moved to Vernon, British Columbia, in 1920, when his father, Ralph (see Entomology Newsletter 37(11):2), was appointed officer-in-charge of that forest insect laboratory. After graduation from Oregon State College in 1925 with the degree of B.Sc.F., George joined the Vernon Laboratory in 1925. In 1931 he obtained a M.Sc. from Iowa State University. In 1940 he was appointed Officer-in-Charge of the Vernon Laboratory, succeeding his father.

In 1947 he was loaned by the Federal government to the University of British Columbia for one year, to establish and teach courses in forest entomology. Later he was appointed Officer-in-Charge of the Calgary Laboratory, a position he held until 1960 when at his own request he was allowed to return to his specialty — research in bark beetle taxonomy. George retired from the Federal Service in 1964.

George always maintained a keen and active interest in his chosen fields of entomology and forestry. He was a charter member of the Entomological Society of British Columbia, Entomological Society of Alberta, and Canadian Institute of Forestry, Rocky Mountain Section. In addition, he was a member of the Zoological Society of Canada, the Entomological Society of Canada, and the Entomological Society of America. George had a long and distinguished career in both scientific research and in research management. He published over 50 technical papers on forest entomology subjects and management of stands subject to insect attack. During the last years of his service with the Federal Forest Entomology Laboratory in Calgary, he completed a major review of an important genus of forest insects, *Ips*. This work remains a landmark contribution. In the year of George's retirement he was honored by election to Honorary Membership in the Canadian Institute of Forestry for distinguished service. George held the following offices: Vice President of the Entomological Society of Alberta in 1954, President of the Entomological Society of Alberta in 1956, Chairman, Rocky Mountain Section, Canadian Institute of Forestry 1949-50; Historian, Rocky Mountain Section, Canadian Institute of Forestry 1967-68.

George Hopping was an Honorary Member of the Entomological Society of Canada. A short biography was published in the Entomology Newsletter 43(1) at the time of his retirement.

George was a modest man of great integrity and kindness. He was gifted with a great sense of humor, a keen ear for music, and a prodigious memory, but no sense of modesty when it came time for a song, a poem, or a joke. He is remembered and missed by a multitude of friends with great affection and respect.

R. W. Reid

# ENTOMOLOGICAL SOCIETY OF CANADA



## Gold Medal for Outstanding Achievement in Canadian Entomology and The C. Gordon Hewitt Award

Members of the Society are invited to nominate persons whom they regard as eligible for these awards. Nominations should be sent to the Achievement Award Committee, Entomological Society of Canada, 1320 Carling Avenue, Ottawa, Ontario K1Z 7K9, in an envelope marked "Confidential" and should comprise: (1) the name and address of the nominee(s); (2) a statement of relevant achievements; and (3) the name of the nominator and at least one seconder. To be considered by the Achievement Awards Committee, nominations must bear a postmark no later than 30 November 1974.

The following conditions govern these awards:

- Outstanding contributions should be judged on the basis of (a) superior research accomplishment either as a single contribution or as a series of associated endeavours and which may be either in entomology or a related field where the results obtained are of great consequence; or (b) dedicated and fruitful service in the fields of Society affairs, research administration, or education.
- No more than one of each award shall be granted per year but, where circumstances warrant, more than one individual may be mentioned in a single award.
- Recipients need not be members of the Society providing their contribution is judged to have a major impact on entomology in Canada.
- Each award may be granted on different occasions to the same recipient but for different contributions to entomology in Canada.
- nominees for the C. Gordon Hewitt Award must be less than 40 years of age throughout the calendar year in which the award is both announced and awarded.



# OFFICERS, COUNCIL, COMMITTEES, AND REPRESENTATIVES

1974-75

## Executive Committee:

President:	C. R. Harris, London
Past-President:	J. R. McLintock, Saskatoon
President-Elect:	C. S. Cooper, Rexdale

## Managing Council:

Secretary (to 30 Dec. 1974) (from 1 Jan. 1975)	D. M. Davies, Hamilton N. S. Church, Saskatoon
Treasurer	E. C. Becker, Ottawa
Editor (to 14 Sept. 1974) (from 15 Sept. 1974)	V. R. Vickery, Ste Anne de Bellevue P. E. Morrison, Waterloo

## Archivist:

L.-C. O'Neil, Sherbrooke

## Bulletin: Asst. Editor

D. C. Eidt, Fredericton

## Committees

### Achievement Award

G. S. Cooper (Chairman)

### Common Names of Insects

J. E. H. Martin (Chairman), C. C. Loan, C. J. S. Fox, D. C. Herne,  
A. G. Robinson, F. J. H. Fredeen, G. E. Ball, A. F. Hedlin, R. O.  
Paradis

### Editorial Board

C. M. Yoshimoto (Chairman), H. Salkeld, (Vice-Chairman), V. R.  
Vickery, W. G. Wellington, J. L. Auclair, P. E. Morrison (ex-  
officio)

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K. G. Davey (Chairman)

### Employment

A. G. Robinson (Chairman), S. R. Loschiavo, B. Heming

### Fellowship

To be appointed

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A. Cloutier, H. Howden, D. G. R. McLeod, P. H. Westdahl, E. C.  
Becker (ex-officio)

### Gift Subscription

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Barker, R. W. Fisher, J.-J. Cartier, J. B. Adams

### Insect Colonies

J. S. Kelleher (Chairman)

## Membership

J. McNeil (Chairman), M. Dolinski, R. Wright, B. Philogène

## Nominating

J. J. R. McLintock (Chairman), J. W. Arnold, A. J. Thorsteinson

## Insect Photo Salon

R. A. Brust (Chairman), Z. Zettler, B. Cheale

## Program

P. Harris (Chairman), C. D. F. Miller, W. J. Turnock

## Publicizing Entomology

A. D. Tomlin (Chairman), G. G. Grant, R. Wright

## Scholarship

J. J. R. McLintock (Chairman)

## Science Policy

E. G. Munroe (Chairman), B. N. A. Hudson (Vice-Chairman), W. F. Baldwin, I. W. Varty, R. K. Stewart (ex-officio), F. L. McEwen (ex-officio), W. J. Turnock (ex-officio), J. A. Downes (ex-officio), C. R. Harris (ex-officio).

## Student Encouragement

D. Lemkuhl (Chairman)

## Ad Hoc Committees

### Achievements

J. J. R. McLintock (Chairman), G. S. Cooper, C. R. Harris

### Biological Survey of Insects

J. A. Downes (Chairman), D. K. McE. Kevan, E. G. Munroe

### By-laws

M. E. MacGillivray (Chairman), J. A. Downes

### Extension Study

W. J. Turnock (Chairman)

### Future Meetings

I. W. Varty (Chairman), S. R. Loschiavo, P. Harris

### Manpower Study

F. L. McEwen (Chairman), A. J. McGinnis, C. R. Harris (ex-officio)

### Nominees to Grant Selection Committees

I. W. Varty (Chairman)

## Representatives

### SCITEC

R. K. Stewart, S. B. Hill (alternate)

### BCC

E. G. Munroe, R. K. Stewart, S. B. Hill (alternate), P. Martel (alternate)

### Canadian Committee on Water Pollution

A. L. Hamilton

### Canadian Council on Animal Care

A. E. R. Downe

### CSA Committee on Common Names for Pest Control Chemicals

L. A. O. Roadhouse

# REPORTS OF EDITOR, ARCHIVIST COMMITTEES AND REPRESENTATIVES

## EDITOR

Issues of *The Canadian Entomologist* are not yet appearing on time. At present the only holdup is with Runge Press. During the latter half of 1973 we did not have enough manuscripts to provide Runge Press with quantity which would be sufficient to overcome the delays. This has changed and we are now able to estimate that issues will be appearing on time by the end of 1974, if not before then.

New referee information and instruction sheets have been in use for a year and have been well received. We also have post cards to be sent thanking reviewers of manuscripts for their efforts.

I would like to express my sincere thanks to Miss Margaret McBride, Managing Editor, who has done an excellent job under trying circumstances. Our executive should ensure that her salary is maintained commensurate with her efforts on our behalf and that provision for compensation for inflationary erosion be automatic.

The three Associate Editors, Dr. R. J. Wensler, Mr. C. A. Miller and Mr. Ray F. Morris, have carried a great part of the editorial burden and deserve a vote of gratitude for their untiring efforts.

The editorial procedure is running smoothly. Most papers are reviewed in six weeks or less. For this, the referees who read manuscripts deserve our thanks. We have had difficulty in retrieving some papers from the reviewers to whom they were sent and these papers have been delayed despite our best efforts. Most authors now are sending two review copies of manuscripts as well as the original and this has made it possible to reduce review time considerably. We hope it can be reduced still more. The postal service managed to lose some manuscripts, which delayed certain papers.

Manuscripts handled 27 August 1973, to 9 July 1974.

No. received	191
No. rejected	2
No. approved	163*
Approved after revision (incl. above)	83
Sent for major revision, not yet returned	13
Sent for minor revision, not yet returned	13
In hands of referees	31
With Editor	3
Papers published (of those rec'd since Aug. 27, 1973)	74
Page charges waived — 1 paper, approx. 9 pages.	
Total pages published <i>Can. Ent.</i> , 1973 (529 Pielou)	1600
Total pages published <i>Can. Ent.</i> , 1974 to date	448
Memoirs published (Total 390 pages)	3
Memoirs in press	2
Memoir edited, then withdrawn	1
Total Memoir pages published, Aug. '73 to July '74	1685

\*Includes some papers which were under revision or with referees on 27 August 1973.

The number of manuscripts now in the hands of the printer or being prepared for the printer by Miss McBride will fill the October and November, 1974, issues.

You will note from the Treasurer's Report that printing charges have been increased. I think the time has arrived when serious consideration should be given to alternative, less expensive methods of publication.

When I agreed to become Editor in May, 1973, it was with the understanding that I would work to overcome the problems which then were causing serious delays in publication. These problems have been solved and the delays will be overcome soon. My acceptance was also conditional on my health. Now, I find it necessary to resign and pass the job to someone else. At least, the new Editor will have a complete file on all manuscripts currently being processed; at the beginning I had no records at all.

I hope the three Associate Editors will agree to continue and support the new Editor. An additional Associate Editor should be appointed to deal with papers of taxonomic nature. Dr. Pechuman was forced to resign for health reasons, so I have also acted as Associate Editor for such papers for the past eight months.

My sincere thanks to my secretary, Miss Nora Brown, and to all others who have assisted to lighten the load and to get *Can. Ent.* going again as a smooth running organization.

V. R. Vickery

## ARCHIVIST

Little has taken place in connection with the Archives, since the last annual report. Much of the year's correspondence concerns the acquisition of audio and video tapes relating to the life, memories and experiences of noted Canadian entomologists. Some of it also has to do with the acquisition of material from regional societies.

It might be noted that la Société entomologique du Québec has moved to have its own archives. Dr. J. M. Perron of the Département de biologie de l'Université Laval has been named Archivist, and l'Université Laval will hold the material. This move was initiated on the occasion of the 100th anniversary of the Society.

With regard to the deposition of the Archives presently under my custody the following actions have been initiated in connection with the transfer of material to the Public Archives of Canada:

- The material on loan to the Chemical Control Research Institute of the Canadian Forestry Service, Ottawa, will remain there. The display panels have been up-dated, and proper identification of the ESC contribution is apparently provided.

- Insect material on hand in Sherbrooke is to be transferred to Dr. E. C. Becker of the Biosystematics Research Institute, Ottawa, for appraisal of its value and eventual safekeeping, if justified. Dr. Becker is to report to the Board of Directors.

- The published material on hand (*Canadian Entomologist*, *Memoirs*, *Bulletin*) is suitable for deposition in the National Library, rather than in the Public Archives. Given that the National Library already has on hand complete series of this material, that which is at Sherbrooke could be transferred to the

Treasurer who is presently holding such material, part of ESC stock. There is some question, however, about the disposal of a complete series of the *Entomology Division Newsletter*, presently at Sherbrooke.

— The display panels can be transferred to the Public Archives. However, it will probably be stored in some different manner and it would appear the panels will have to be dismantled, and only significant material retained. Perhaps they should be photographed before this is done.

— The rest of the material (photos, correspondence, other documents) can be transferred directly to the Public Archives.

Two people from the Public Archives were in Sherbrooke, in the winter of this year, to examine the material at hand. It is my feeling that the ESC is ready to transfer its Archives to the Public Archives of Canada, given the considerations and terms outlined by Mr. Yeo of the Public Archives. Consequently, I submit to the Board of Directors of the ESC, in duplicate, an agreement form which appears to be standard, and which I have filled in for the ESC. If the Board of Directors be agreeable to such depositions, the agreement forms should be sent to Dr. Yeo for proper endorsement by the Public Archives of Canada, and then I will endeavor to effect the transfer as soon as possible, given that transport and travelling expenses may be involved.

Louis C. O'Neil

## ACHIEVEMENT AWARD COMMITTEE

The procedure followed for obtaining nominations for the 1974 ESC Achievement Award followed the terms of reference established in April, 1973. Nominations were requested by 30 November 1973. An advertisement was inserted in the *Bulletin*. In addition, in an attempt to stimulate interest on the part of the membership, each member received a letter inviting nominations. Also the Chairman of the Committee wrote to all ESC Directors asking them to remind members with whom they had contact that nominations were being received. In coming to a decision, the Committee consulted first by telephone and in a meeting at London, Ontario on 25 January 1974, Dr. Philip S. Corbet was selected as the 1974 nominee. A brief announcement of the award was placed in the *Bulletin* and a more detailed brochure outlining Dr. Corbet's achievements has been prepared. Dr. Corbet will receive the award at the Annual Meeting in Halifax.

Without detracting from those nominated for the award, all of whom were well worthy of the nomination, the Committee does feel it necessary to point out to the Governing Board that interest of members of the Society in the Achievement Award is at a low level. It is only through the interest of members of the Governing Board and a few Society members that an adequate number of nominations is being obtained. The Committee feels that there are a number of entomologists who have made outstanding contributions to Canadian entomology who have not been nominated for the award. Hopefully members of the Society will become more active in making nominations in the future.

J. S. George, L. A. O. Roadhouse  
C. R. Harris (Chairman)

## EDITORIAL BOARD

During 1973-74, 14 manuscripts of book reviews were submitted to the *Bulletin* for publication.

A matter which concerned this Board in 1973 was the ever-increasing number of requests by authors to have page-charges waived. There is no firm editorial policy on this matter, and this Board would like to propose the following recommendations:

1. No more than 50 pages or 4% of a volume may be allocated to papers with waived page-charges.

2. Page-charges may be waived for both members and non-members of the Society, only if the author is (a) an amateur (b) is retired and has no affiliation with an institution (c) is from an underdeveloped country and has no affiliation with an institution.

In cases (a) and (b), no more than two manuscripts from any one author should be considered per year, and each manuscript should consist of no more than 15 printed pages. In case (c) no more than one manuscript every three years should be considered and the manuscript should consist of no more than 15 printed pages.

3. The Editorial Board should give the Editor sole authority to waive page-charges on manuscripts of less than 5 printed pages, but to restrict the number of such manuscripts to no more than three per volume.

Because of recent problems concerning non-payment of publishing and reprint costs, the Editorial Board recommends that a statement guaranteeing payment of page-charges, reprints, and other costs must accompany a manuscript before that manuscript will be considered for publication.

S. E. Dixon, H. Salkeld,  
W. G. Wellington, J. L. Auclair,  
C. M. Yoshimoto, Chairman.

(The Governing Board accepted recommendation number 1 and left action on number 2 and 3 to the discretion of the Editorial Board - Ed)

## ASSISTANT EDITOR (BULLETIN)

Volume 5 for 1973 had 152 pages, making it the largest thus far by 36 pages. One supplement, the June 1973 revision of "Laboratory Colonies of Insects, Mites and Ticks in Canada" accompanied Vol. 3, No. 2. Reprints of the 1973 Annual-Meeting and Photo Salon announcement and reply forms were obtained for the 1973 Programme Committee.

The first two numbers of Volume 6 for 1974 have been published. The supplement "A Biological Survey of the Insects of Canada" accompanied Vol. 5 No. 2. A leaflet requesting names of persons who have made outstanding achievements in entomology for a list being prepared by the Ministry of State accompanied Vol. 5, No. 1.

Mr. G.C.R. Croome who assisted me with editing and proofreading on an hourly basis has been succeeded by Mrs. Margaret Cameron. Mrs. Cameron, who has a strong biological background is Regional Editor, Maritimes Forest Research Centre.

D. C. Eidt



## FINANCE COMMITTEE

The Committee has still been unable to meet as a group, and because of summer field work, communications have been far from adequate. Although the substance of the report has been agreed to in principle, the Chairman regrets that some of the details dealing with the magnitude of increases for page charges, etc., have not been made available to all Committee members for their comments, and he thus accepts full responsibility for any errors therein.

### Capital Reserves

As of July 20, 1974, the Society had \$45,000 invested in bonds and \$60,000 invested in certificates, with cash on hand at some \$76,800. At its interim meeting (Feb. 74) the Board of Governors recommended that all low-yielding bonds be converted to higher-yielding certificates. Since then, the Executive Committee has empowered the Treasurer to convert the \$45,000 in bonds to guaranteed investment certificates.

The Board of Governors also accepted, on a recommendation of the Finance Committee, to set aside, annually, a percentage of the year's income equivalent to the loss of buying power of the previous year. Because of the doubling of the cost of printing the *Can. Ent.* it has proven impossible to budget for such in 1975. However, the principle should be reaffirmed and after a comparison of the budget and the actual expenses of the Society has been made during the next nine months, another attempt will be made to budget for inflation in 1976.

On the grounds that inflationary conditions are worldwide and at least are partly a result of changing social attitudes (greater consumption for less output) and thus are not likely to disappear in the near future, the Finance Committee believes that the Society will more likely achieve greater investment income by taking advantage of high interest rates over the short term, rather than lower rates on long term investments as in the past. Accordingly the Finance Committee recommends that the Board of Governors empower the Treasurer, acting on the advice of the Finance Committee and with the consent of the Executive Committee, to reinvest the Society's capital, now in certificates, whenever they become due, to high-interest short-term certificates.

### Use of Capital

Inspection of membership data shows that student memberships are lower than in 1965, regular memberships are lower than in 1970 and subscriptions appear to have stabilized. Canada's largest employer of entomologists has adopted a stated policy of reducing the number of positions in entomology, and the Society must be prepared to level off, perhaps even decline in size. To continue its present high standard of living, it will have to rely increasingly on investment income to pay for scholarships, awards, meetings etc. Therefore the Society must reject any consideration of paying its bills with capital, even if some of that capital were, in the past, acquired in anticipation of higher publication costs.

Capital could, however, be used to support some special project or study (eg. manpower study) which the Board feels is vital to the Society, but for which money cannot be found in the Society's receipts of that year. The Finance Committee recommends that such expenditure of capital be avoided whenever possible.

## Additional Sources of Revenue

Since the last meeting (Feb. 74) of the Board of Governors, the printer of the *Canadian Entomologist* raised its rates from \$16 to \$38, then reduced them to \$33.50 per page, to take effect when the Board holds its next meeting. In the Treasurer's budget for 1975 "disbursements" are calculated to include these increases in printing costs. The "receipts" on the other hand are calculated at the 1974 rates. It is evident that some means of additional revenue must be found to make up for the \$43,000 deficit.

The Finance Committee rejected both capital, and membership fees, as sources of additional income, and opted instead for moderate increases in subscriptions, back issues, and reprints and a substantial increase in page charges.

To effect economies, the Committee recommended:

1. Increase in overhead charge for *Memoirs*.
2. Reexamination of need for B.C.C. membership.
3. Economies in executive travel.
4. Reexamination of need for interim (mid-winter) meeting of the Board of Governors.
5. Reduction in budgeted amount for secretarial assistance.
6. Decrease in frequency of published membership lists.
7. Typed list of *Insect Colonies* . . . on demand in lieu of printed list.
8. That NRC be approached for a grant for the primary purpose of remitting page charges to Society members who are also university members actually or potentially in receipt of NRC grants. This would effect a cost saving both to authors and to NRC because space in the *Canadian Entomologist* costs less than in NRC journals.
9. Not establishing a non-subscribing membership class.

The Committee recommended certain significant expenditures:

1. Appropriate salary adjustments for the Managing Editor and the Treasurer's Clerk.
2. Cost of projected Manpower Study, up to \$3000., be taken from capital.
3. Advised the ceiling price for a Society Headquarters building be increased from \$100,000 in line with the real cost of suitable property in Ottawa.

A. Cloutier  
H. F. Howden  
P. H. Westdal  
E. E. Lindquist (by invitation)

W. T. Cram  
C. R. Sullivan  
E. Becker (ex officio)  
D. M. Wood, Chairman

## CANADIAN ENTOMOLOGIST 100 YEARS AGO

Even in the case of injurious insects it is seldom necessary to invent common names, for where species are really destructive the people almost always have a name for such just at hand. 6:174.

*So there! Common Names Committee.*

## COMMITTEE ON STUDENT ENCOURAGEMENT

Regional Committees on Student Encouragement have continued to be active the past year. Alberta has purchased display and rearing boxes which are sold to students at cost. Similarly, Manitoba has assembled collecting kits which are available for \$5.00. Parents and young people who have purchased the kits meet periodically to compare notes and view demonstrations. In Quebec, the Committee aids in the support of an Entomology Fair organized by the Association des Entomologistes Amateurs du Québec. The Saskatchewan Society again organized meetings and field trips with science teachers with the aim of demonstrating the value of insects in the classroom. Grants of \$100.00 were made available to any affiliated society which made a request.

On a national level, an effort was made to elicit material from ESC members for a notebook on insect projects and experiments. Not enough material has been received yet to proceed with the project. In the meantime, the TIEG (Teen International Entomology Group) Newsletter provides a similar service through feature articles, notes and comments, and letters to the editor, most of which are written by young entomologists. The Committee supported TIEG the past year with a grant of \$750.00. In return for this support, Canada's organizations and institutions will be added to the TIEG mailing list upon request; memberships for individuals are \$1.00 per year. Write to TIEG, Professor Warren T. Johnson, Plant Pathology and Entomology Extension, Cornell University, Ithaca, New York 14850, U.S.A.

In conclusion, a great many young people are being influenced by the efforts of the Committee on Student Encouragement, and while the Committee is yet in the formative and experimental stage, all ESC members should feel that continued effort at furthering entomological awareness among young people is a worthwhile objective of the Society.

### GRANTS:

Quebec Regional Society	\$100.00
Manitoba Regional Society	100.00
TIEG	750.00

D. A. Craig  
I. W. Varty  
M. V. Smith  
T. D. Galloway

W. T. Cram  
K. S. McKinlay  
Luc Tobin  
D. M. Lehmkuhl, Chairman

## GIFT SUBSCRIPTION COMMITTEE

Gifts from two Society members of their subscriptions and extensive series of back numbers to the *Canadian Entomologist* and *Memoirs* were sent to worthy recipients in Jamaica and San Salvador. A gift subscription to an institution in the Republic of Zaïre had to be withdrawn because of cessation of entomological activities and the uncertain fate of the publications. Therefore the total of outstanding gifts now numbers seventeen.

A short article was published in the *Bulletin* (6:25) reoutlining the objectives of the gift program and asking members for information on potential recipients of gift subscriptions for use in the program. Only slight response to this request has resulted.

We thank those who have been so helpful to us in the past year.

D. E. Bright, B. V. Peterson  
H. J. Teskey, Chairman.

## SCHOLARSHIP COMMITTEE

The trust shall be called the Entomological Society of Canada Scholarship Fund. The permanent address shall be the same as for the Entomological Society of Canada, 1320 Carling Avenue, Ottawa, Ont. K1Z 7K9.

The object shall be to provide monies for scholarship(s) with the following conditions:

The applicants must be Canadian citizens, or landed immigrants at the time of application. Landed immigrants must have a degree from a Canadian university. Applicants must present proof of acceptance as a full-time, post-graduate student specializing in entomology at a recognized university in Canada.

All monies received for the scholarship fund will be used to support the object of the fund; no trustee shall receive any gain from monies received.

The trustees shall be the Past-President of the Entomological Society of Canada (ESC) as Chairman and two others appointed annually by the President of the ESC. The trustees shall be responsible to the Governing Board of the ESC and shall select the recipient(s) of the scholarship(s).

In case of dissolution, all assets after payment of liabilities shall be distributed to one or more recognized charitable organizations in Canada.

The effective date of this document shall be 25 February 1974.

The fiscal period shall be the calendar year.

D. K. McE Kevan, Chairman	Dept. of Entomology, Macdonald College, Ste. Anne de Bellevue, Quebec.
J. E. McFarlane, Trustee	Dept. of Entomology, Macdonald College, Ste. Anne de Bellevue, Quebec.
D. M. Wood, Trustee	Biosystematics Research Institute, Agriculture Canada, Ottawa, Ont. K1A 0C6

## ELECTION COMMITTEE

The Election Committee of the Entomological Society of Canada met in Toronto 17 July to open and cut those ballots received by the Chairman before midnight of 15 July. A total of 760 ballots were mailed to members by the Secretary, and 358 were returned. The following are the results of the election:

President-Elect:	(1 ballot spoiled)	George S. Cooper
Directors-at-Large:	(1 ballot spoiled)	Jean-Jacques Cartier James S. Kelleher
C. Gordon Hewett Award:	Yes	
Fellowship Proposal:	Yes	
	S. E. Dixon, S. B. McIver	
	K. G. Davey, Chairman	

## ESC — ESO LIASON COMMITTEE

On 4 June 1974, the Liaison Committee of the Entomological Society of Canada met with the Liaison Committee of the Entomological Society of Ontario to discuss matters of mutual interest to the two societies. Present were: Dr. A. E. R. Downe, Dr. R. W. Fisher, Dr. J. S. Kelleher, Dr. J. F. McAlpine, Dr. F. L. McEwen, and Dr. W. Y. Watson. At that meeting the following actions were taken:

1. Recognized that the Entomological Society Library is now under the ownership and control of the McLaughlin Library, University of Guelph.
2. Agreed that the move to give title to the McLaughlin Library was correct, that the library is well maintained and that full service and access is provided entomologists throughout Canada.
3. Moved that the library committee be asked to appraise the memberships of the ESC and the ESO of the holdings in the McLaughlin Library and the procedures to be followed by members wishing its use.
4. Moved that the ESC and the ESO continue their support for development of the entomological holdings in the McLaughlin Library.
5. Moved that the exchange program with the *Canadian Entomologist* be limited to its current level of 35 subscriptions and that the library committee review annually the exchange program.
6. Moved that the treasurer of the ESO canvass the membership of the ESO regarding their wishes on whether the dues to the ESO by those who are members of both societies should be collected by the treasurer, ESO, through the treasurer, ESC, or either.
7. That the Constitution Committee, ESO seek advice from proper authorities as to whether it is constitutional to collect its annual dues through the agency of the ESC.

F. L. McEwen, Chairman

## HONORARY MEMBERSHIP COMMITTEE

The Honorary Membership Committee had a relatively inactive year. The Society has nine Honorary Members, including E. M. Duporte, A. W. Baker, W. N. Keenan, R. E. Balch, A. D. Pickett, J. G. Rempel, H. H. Ross, G. F. Manson and G. P. Holland. We regret that G. R. Hopping died 30 March.

Vacancies in Honorary Membership need not be filled within the year following the occurrence of such a vacancy and should wait until each Affiliated Society has had a chance to consider it at its next Annual Meeting. Each Affiliated Society is urged to consider submitting a nomination to fill the present vacancy in the Honorary Membership of the Society.

J. B. Adams, AES	J. J. Cartier, ESQ
L. G. Putnam, ESS	W. A. Charnetski, ESA
P. S. Barker, ESM	R. W. Fisher, ESO
N. V. Tonks, ESBC, Chairman	

(Since this report we learned of the death of Prof. Baker on 26 August

— Ed)

## SCIENCE POLICY COMMITTEE

### I. Proposal for a House of Science and Technology.

At a meeting arranged by MOSST, of their representatives, with society presidents and representatives, five committees were appointed to study various aspects of the HOST proposal. The Science Policy Committee of ESC recommended that HOST should be regarded only as an accommodation for societies which would then be able to maintain their autonomy. The President of ESC has sent comments directly to the chairmen of the committees and to the Biological Council.

### II. The Contemporary Role and Responsibilities of the Entomological Society of Canada.

The brief prepared by the Science Policy Committee was used as a basis for discussion by a Special Interest Group on the subject at the Halifax meeting of ESC. It will not be published in its present form, but will be used as a guide by the new Science Policy Committee in reforming its terms of reference.

The Science Policy Committee for 1974-75 has been structured so that close contact can be maintained with other ESC Committees whose activities affect the policies and actions of the Society, and also with the umbrella societies through the ESC representatives.

W. F. Baldwin

## EMPLOYMENT COMMITTEE

The Employment Committee maintains a file containing curricula vitae of members seeking employment in entomology, and a file of positions available. Advertisements are placed in the *Bulletin* under "Positions Wanted", for those who request this service. In 1973 seven entomologists asked for this assistance.

By 30 June 1974 eight inquiries had been received, asking about employment opportunities. Some of these could not be assisted through the *Bulletin* because they are not members of ESC. No letters have been received from employers offering job opportunities.

S. R. Loschiavo, B. Heming  
A. G. Robinson, Chairman

## INSECT PHOTO SALON COMMITTEE

The Photo Salon Committee decided to open two new categories for 1974, viz, color slides and photomicrographs. Certificates will be given to the winners in each of the 4 categories, and a certificate for the winner of "Best in Salon". Ribbons with the Ent. Soc. Canada insignia will be attached to all winning photos. The present Insect Photo Salon Committee has agreed to serve for 1975.

Bob Cheale, Sheldon Zettler,  
R. Brust, Chairman

(1974 Photo Salon Winners are announced elsewhere in this issue. Two of the four categories of entries were represented-Ed.)



## REPRESENTATIVE TO CANADIAN COMMITTEE ON WATER POLLUTION

You will have received a request that beginning in 1976 the Entomological Society of Canada budget for modest annual contributions to the support of the International Association on Water Pollution Research.

It is my opinion that the IAWPR could become a reasonably effective vehicle for focusing government and public attention on the need for sound research on water pollution. It also seems to me that such a vehicle is likely to be much more effective if it is supported (financially as well as with expertise) by participating societies as well as interested government departments. I have looked through the titles of previous publications in Water Research, but I really couldn't make an accurate guess as to how many papers were published in this journal by members of the Ent. Soc. of Canada. Personally I am not concerned about this particular statistic. I am much more concerned that sound research work on the effects of water pollution on aquatic insects (as well as other biological components of the ecosystem) is being carried out and published in suitable journals (Water Research is only one example).

I do, however, think that the International Association of Water Research is one association that can help to foster the right conditions for research and I hope that the Entomological Society of Canada will agree to contributing to the financial support of this association.

Andrew L. Hamilton

## MEMBERSHIP COMMITTEE

Application for Membership blanks developed and printed during the year have been distributed variously including a small series sent to the department heads of entomology at several Canadian universities, and publication in Bulletin 6(1).

Correspondence initiated with the secretaries and membership chairmen of the regional entomological societies in Canada led to a cooperative exchange of membership information with the Entomological Society of Alberta.

P. E. Blakeley, P. S. Barker

R. W. Stark, R. E. Bellamy, Chairman.

## COMMITTEE ON COMMON NAMES OF INSECTS

The chairman corresponded with the Secretary, Committee of French Names of Insects of Economic Importance in Canada, regarding the availability of the fourth edition of the French Names of Insects in Canada, and was informed that copies will be made available to all entomologists in Canada.

No name proposals were submitted to the Committee during the year.

C. C. Loan

C. J. S. Fox

D. C. Herne

A. G. Robinson

J. E. H. Martin, Chairman

F. J. H. Fredeen

G. E. Ball

A. F. Hedlin

R. O. Paradis

## AD HOC COMMITTEE ON PROJECTED MANPOWER STUDY

A proposal that the Society conduct a manpower study to determine future requirements for entomologists in Canada was presented to the Board of Directors at the February meeting in Montreal and an ad hoc committee was established to investigate ways of implementing it. The original proposal had suggested that although the ESC has relied largely on voluntary work on the part of its membership to carry out important projects, it has become apparent in recent years that most members do not have sufficient time to devote to major society projects. It was therefore suggested that consideration be given to "contracting out" the manpower study. Three sources of funds were considered possible, i.e. assistance from government agencies, from industry, or from the Society itself. It was felt that financial participation in the study by potential employers would help to ensure their cooperation.

During the past few months the Committee has investigated the possibility of obtaining funds from outside sources. In general both government agencies and private industry have responded enthusiastically to the proposal, and have offered full cooperation in terms of assistance in planning the study and in providing information required. However, it is apparent that direct financial support from government agencies will not be available. There has been some indication that a few private companies would be willing to contribute limited funds to help initiate the study. However, they do have reservations, since support of one such study would inevitably result in requests for financial support for similar studies from other organizations.

It would appear that if the Society wishes to go ahead with a manpower study, it will have to do so without outside financial assistance. There are 2 possible approaches: 1) for the Society to hire a qualified person to conduct the study (approximately \$5,000.); or 2) for the Society to ask for interested volunteers willing to serve on a committee which would undertake the study on a voluntary basis. To reduce expenses a combination of 1) and 2) might also be considered.

F. L. McEwen, W. J. Turnock  
C. R. Harris (Chairman)

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

The Canadian Standards Association (CSA) Committee on Common Names for Pest Control Chemicals convened on 8 May 1974. The new Standard Z-143 entitled "Common Names for Pest Control Chemicals", which will contain approximately 425 names, is in the final stage of production. Final galley proofs are expected shortly. Separate English and French editions will be published.

The meeting discussed and approved 108 new common names. Twenty-one proposed names were considered not acceptable because of trade mark conflicts or requirements for additional information. Twenty-seven trivial or chemical names were also accepted for inclusion in Appendix B of the Standard. The new common, trivial and chemical names are to be added to a future edition of the Standard. In the meantime, these names are to be reviewed by a sub-committee and if found acceptable, an addendum is to be prepared for submission to the CSA for printing.

L. Roadhouse

## REPRESENTATIVE TO SCITEC

In 1974 the Association of the Scientific, Engineering and Technological Community of Canada had two major areas of activity. The first was to organize a Forum held in Ottawa in May to discuss Vol. 3 of the report of the Lamontagne Committee. This proved to be a most interesting and lively Forum with the Scientific Community reacting strongly to some of the recommendations of the Committee. The Scientists were opposed to the separation of Basic and Applied Research and were very wary of any system which would tend to impose strategy on scientists, especially through a single Ministry. Senator Lamontagne spoke at the Forum, and although his report recommended that the Royal Society and SCITEC be the two main channels of communication between Government and the Scientific Societies, he criticized SCITEC severely, saying that it was conservative, cumbersome and too slow to react, and lacked the confidence of the Engineers and the Social Sciences. He suggested an alternative means of communication between the Societies and Government, which was in fact a system of several national organizations representing the different areas of science, operating through a super council. In fact SCITEC has been on the horns of a dilemma, in that Government have been pressing them to act as the single voice of science, whereas the Societies are suspicious of this and fiercely protective of their autonomy. During the Forum discussions Dr. Eugene Munroe and I suggested the following model for the relationship between SCITEC, the Societies and Government with respect to communication.

(a) SCITEC is the single voice on matters on which Societies can agree.

These matters may be:

1. Matters of general consensus.
  2. Matters of interest to a sector (eg. Life Sciences or Social Sciences) to which SCITEC will lend its agreement, authority and support.
  3. Matters similar to those in No. 2 but of interest to a single society.
- (b) SCITEC will define and emphasize the needs and problems of different fields and disciplines and will recognize that a particular policy or machinery that is good for one discipline or field may be bad for another.
- (c) SCITEC will not interfere with the right and duty of sectors and Societies to deal with problems in their own sphere.

The other major area of activity has been to pursue the concept of HOST (House of Science and Technology). There have been several meetings between SCITEC representatives and MOSST (Ministry of State for Science and Technology) personnel on this subject. The Ministry has the idea of an organizational set-up which will be a mediator between the Government and the Scientific Community, whereas SCITEC's idea has been merely a physical facility to allow more efficient working of the Scientific Societies. The Societies have in the main supported the concept of HOST, but are still dragging their feet over the question of autonomy and cost. An expanded HOST Committee will report to SCITEC on the development of the HOST concept in the Fall of 1974.

SCITEC's plan to have a fall Forum "The Conserver Society" did not come to fruition due to a reallocation of resources within Science Council. They do wish however to have this Forum, and it is tentatively planned for the early months of 1975.

Robin K. Stewart

## COMMITTEE ON INSECT COLONIES

The latest revision of the list of "Laboratory Colonies of Insects, Mites and Ticks in Canada" was published as a supplement to *Bulletin* 5(2) June 1973. The next revision is due in 1975. The Governing Board has accepted the suggestion that the list be made available only to those who request it, thereby reducing publication costs. A notice to this effect would be placed in the *Bulletin* annually. The Board also suggested that the list include spiders, myriapods and Collembola and be titled "Insects and other arthropods".

J. S. Kelleher

## BCC REPRESENTATIVES

I. At the March 1974 meeting of the Biological Council of Canada the President Dr. Roy Taylor presented a brief entitled "Blueprint BCC". Dr. Taylor described the role of BCC "... adjusted to fit the new situation for science in Canada outlined in the recent speech from the throne." The roles of BCC were restated under the following headings:

1. BCC and the Natural Sciences Research Council (NSRC)  
BCC will request that at least one third of the membership of NSRC be drawn from members of the Canadian National Biological Societies. Two would be appointed by BCC and one by CFBS. Also BCC will request appointment of one member to the Medical Research Council and one to the Social Sciences and Humanities Research Council.
2. BCC and the House of Science and Technology (HOST)  
BCC has representation on the five committees appointed by MOSST to study various aspects of the proposals for HOST. The President of ESC has sent comments based on recommendations of the Science Policy Committee.
3. BCC and Parliament  
At the last meeting of BCC we were given to understand that the President (now past President) Dr. R. Taylor and the President-elect (now President) Dr. D. B. Walden had been, and proposed to continue investigating approaches to Parliament in order to provide direct routes for informing members of biological policy directions and priorities.
4. BCC and the Science Council of Canada, and
5. BCC and SCITEC  
Relationships with SCC and SCITEC appear to be much as they have been in the past. The SCC is expected to have a somewhat changed and expanded role if proposed legislation goes through, i.e. it will "adopt an active public information role." The SCC Executive Director will be invited to attend regular meetings of the BCC. He has attended most of these in the past few years.
6. BCC and the Canadian Federation of Biological Sciences (CFBS)  
The BCC will establish a Science Policy Committee which will work jointly with the Science Policy Committee of the CFBS. At present the current executive is acting in this capacity.
7. BCC and its member societies  
The BCC declared its intention to develop new committee structures to handle society-sponsored proposals.

II. Dr. Taylor stated that BCC should be more active in generating policy. Dr. Walden announced the intention that one or more members of the BCC Executive would attend the annual meeting of member societies to discuss science policy. Dr. Bidwell attended the 1974 Annual Meeting of the Entomological Society of Canada (see minutes, this issue) as BCC representative.

It was suggested that BCC should offer the services of qualified people to advise a Parliamentary Standing Committee on Science.

The BCC Committee to the Department of the Environment is to be reconstituted.

III. Initiative for Positive Policy Action by BCC: Proposal for a Biological Survey of the Insects of Canada.

As indicated in last year's report (*Bulletin* 5(4):123) initiatives for action by BCC must come mainly from the component societies. As a first step the ESC requested BCC support for the proposed Biological Survey of the Insects of Canada, as outlined in the brief prepared by Mr. J. A. Downes at the request of the Governing Board and published in a supplement to *Bulletin* 6(2).

Mr. Downes presented this proposal to the Biological Council at the March meeting. The Council strongly supported the proposal and it was suggested that the survey of insects might form the spearhead for a general biological survey. Drs. Walden and Taylor undertook to find out the most suitable way to introduce the proposal to MOSST and agreed that a committee should be formed comprising about 5 persons, including ESC representatives, to meet with MOSST officials and possibly with Science Council. Accordingly the ESC President nominated Drs. Munroe and Kevan and Mr. Downes as the ESC members and Dr. J. Aldous, Vice-president of BCC, has been nominated by BCC. Subsequently Dr. Taylor was appointed by Dr. Walden to chair a General Biological Survey Committee with Drs. J. Aldous, W. F. Grant, M. J. Dunbar and Mr. J. A. Downes as committee members. Dr. Walden has further undertaken to write to MOSST endorsing an early initial approach to the Ministry by the ESC Committee regarding the specifically entomological aspects of the Biological Survey.

E. G. Munroe and Anne Hudson

### CANADIAN ACHIEVEMENTS IN SCIENCE AND TECHNOLOGY - ENTOMOLOGY

In the June *Bulletin*, a form letter was sent out calling on members to suggest names of eminent Canadian entomologists for inclusion in the Society's list to be submitted to the appropriate Federal Ministry. Owing to a series of events beyond the Society's control and which seriously interrupted our communication system, members did not receive notices until after the suggested deadline had passed. Response was understandably small. We have since learned that, for the same reasons, the Ministry's deadline has been postponed. We therefore repeat the call for suggestions. We hope that you still have the form and will use it, or send us a letter any way. Our new deadline is November 1, 1974. Suggestions should be mailed to the Past-President of the E.S.C., Dr. J. McLintock, Agriculture Canada, Research Laboratory, University Campus, Saskatoon, Sask. S7N 0X2

## IS THE ESC A GUEST IN ITS OWN HOUSE?

Commentary on the report of a committee on future national meetings

The ESC dines well. Its annual meeting is cooked up and served piping hot by an affiliated (regional) society acting as host each year. This entomological feast follows a more or less regular circuit around Canada in 8-10 years, and offers an original menu usually very palatable to our technological and intellectual appetites.

Yet the Governing Board has squirmed uncomfortably in recent years, even as it applauds the success of its regional hosts! The problem is that the Board has so delegated its responsibilities that it no longer has a significant input into the scientific programme offered at its own annual meeting. The affiliated society carries the whole burden for both scientific content and local arrangements, and the load is inequally heavy on those few activists who organize joint meetings.

A few months ago President John McLintock appointed an ad hoc committee (Sam Loschiavo, Peter Harris, Bill Varty) to look into the procedure for organizing the scientific aspects of the annual meeting with a view to enhancing the ESC input at the national level. Our Committee considered three aspects of the problem (1) membership attitudes to the annual meeting, (2) strengthening Governing Board participation in the planning of scientific programmes, (3) prospects for "autonomous" ESC meetings without participation of an affiliated society.

We found that ESC members have been satisfied with the format and scientific content of recent meetings. They enjoy the new scene (Banff last year, Halifax this year, Saskatoon next), and believe that the change of locale is the best way to offer all entomologists the chance to attend a national meeting from time to time. Furthermore regional management offers diversity of theme and fresh faces from our own and interlocking sciences. That being so, why rock the boat?

You may have some opinions of your own on the qualities of our national meetings and the ways to increase the return on your time and money expended on attendance. If so, please share your ideas with me.

The second aspect is Governing Board input into scientific programmes at joint meetings. Our Committee proposed that the ESC Board should be an equal partner with the affiliated society in promotion of entomology. We proposed that the best mechanism would be for the Regional Director to be ex officio Chairman of the Joint Programme Scientific Committee; he would thus report directly both to the ESC Governing Board and the affiliated society executive. The Scientific Committee would include two other ESC directors and two regional appointees, plus others at the discretion of the Regional Director. We believe that this arrangement would in no way diminish the stature of the affiliated society, yet it would enable the planning committee to tap entomological resources (themes, speakers, concepts) across Canada through the Governing Board.

The third aspect is the possibility that from time to time the ESC might like to go it alone without the support of an affiliated society. The thought behind this proposal is that there are occasions when a national issue should be faced in a strictly national meeting without dilution from the regional viewpoint. It would be an occasion for our ESC to be *maître chez nous*. In point of fact the



ESC is not committed to share its meeting with a regional society, and is free to organize an autonomous meeting whenever the Board so decides. Our Committee recommended that the Board venture this initiative as the need arose, but not more frequently than twice per decade. In such a year, the autonomous meeting would replace the usual joint meeting, postponing the latter till the following years. The effect on the affiliated society would be to reduce the frequency of organizing joint meetings. The autonomous meeting could be held anywhere in Canada suitable to the theme; because of economy in travel costs, Ottawa would be a strong candidate for the locale.

The Governing Board accepted the Committee's recommendations at the Halifax meeting this August; this notice sketches the rationale behind this motion. The next move is to seek the endorsement of affiliated societies and the reaction of members at large. Canadians in general do not applaud tendencies to strengthen central authority. We believe that this is one occasion when a return to ESC responsibility will strengthen our science without loss of regional enterprise. I invite your comments.

I. W. Varty, Chairman  
Committee on Future Annual Meetings

# MEMOIRS OF THE ENTOMOLOGICAL SOCIETY OF CANADA

No. 93

Revision of the genus *Cymbiodyta* Bed, (Coleoptera: Hydrophilidae).  
113 pp., illus.

by Ales Smetana

Issued 30 May 1974

## INTERNATIONAL COMMISSION ON ZOOLOGICAL NOMENCLATURE

Required six-months' notice is given of the possible use of the plenary powers by the International Commission on Zoological Nomenclature in connection with the following cases:

(see *Bull. zool. Nomencl.* 30, parts 3/4, 28th June 1974)

- 1748. Suppression of *Scoptes* Hübner/1819/(Insecta, Lepidoptera)
- 2042. Designation of a neotype for *Apis rotundata* Fabricius, 1793 (Insecta, Hymenoptera)
- 2044. Designation of type-species for *Eriophyes* Siebold, 1851 and *Phytoptus* Dujardin, 1851 (Acarina, Eriophyoidea)
- 2046. Designation of a neotype for *Geloius decorsei* I. Bolivar, 1905 (Insecta, Orthoptera)
- 2049. Designation of a type-species for *Lonomia* Walker, 1855 (Insecta, Lepidoptera)

(see *Bull. zool. Nomencl.* 31, part 1, 31st July 1974)

- 2053. Suppression of Achiidae, Fleming, 1821 (Insecta, Diptera)

Comments should be sent in duplicate, citing case number, c/o British Museum (Natural History), Cromwell Road, LONDON S.W.7 5BD, England. Those received early enough will be published in the Bulletin of Zoological Nomenclature.

## FORTHCOMING MEETINGS

Canadian Society of Environmental Biologists, 6-10 January 1975, Vancouver.

Canadian Society of Zoologists, June 1975, University of Guelph.

The Canadian Botanical Association, 18-21 August 1975, Saskatoon.

Canadian Phytopathological Society, 18-21 August 1975, Saskatoon.

Entomological Society of Canada, 18-21 August 1975, Saskatoon.

Genetics Society of Canada, 4-6 June 1975, University of Saskatchewan, Saskatoon.

Canadian Federation of Biological Societies, 24-27 June 1975, University of Manitoba, Winnipeg.

SCITEC Council, 2 November 1974, Ottawa.

Entomological Society of America, 2-5 December 1974, Hotel Radisson, Minneapolis, Minnesota.

Southeastern Branch ESA, 28-30 January 1975, Sir Walter Raleigh Hotel, Raleigh, N.C.

VIII International Plant Protection Congress, 21-27 August 1975, Moscow, USSR.

Southwestern Branch ESA, 12-13 February 1975, El Paso, Texas.

North Central Branch ESA, 25-27 March 1975, Kellogg Center, East Lansing, Michigan.

XV International Congress of Entomology, 19-27 August 1976, Washington, D.C., U.S.A.

Centennial of Entomology - Cornell University, 14-15 October 1974.

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### FAO/IUFRO

Second Symposium on Forest Diseases and Insects Delhi, India

Technical Sessions - April 7-12, with field tours April 2-6 and April 14-19, 1975

#### Theme

Worldwide developments and trends in forest pathology and entomology. The program will feature 20 invited papers analyzing the current status of forest insect and disease problems, changing environmental and pesticide requirements, and an indepth look at modern forest pest management.

#### Participation

Anyone from FAO/IUFRO member countries. Volunteer papers to complement the program will be considered.

Contact: R. Z. Callaham, Division of Forest Environment Research, Forest Service U.S. Department of Agriculture Washington, D.C. 20250

# XV INTERNATIONAL CONGRESS

## OF ENTOMOLOGY

### FIRST ANNOUNCEMENT



The 15th International Congress of Entomology will be held in the beautiful capital city, Washington, D.C., U.S.A., August 19-27, 1976, under the sponsorship of the National Academy of Sciences and the Entomological Society of America. Sessions will be held in the excellent meeting facilities of the Washington Hilton Hotel. Special events are being planned at national scientific and cultural centers. Two international airports near Washington give direct access from abroad. University housing will be available in addition to hotel facilities.

The Organizing Committee for the Congress is composed of Curtis W. Sabrosky (Chairman and President of the Congress), Ernest C. Bay (Secretary-General), Wallace P. Murdoch (Treasurer), William G. Eden, Gordon E. Guyer, E. F. Knipling, Robert L. Metcalf, John V. Osmun, Ray F. Smith and Edward O. Wilson.

The program will emphasize plenary symposia, invitational speakers, specialized symposia/work groups/panel discussions, and special interest groups or informal conferences. Thirteen program sections cover Systematics, Genetics, Physiology and Biochemistry, Toxicology, Ecology, Behavior, Social Insects and Apiculture, Biological Control, Medical and Veterinary Entomology, Agricultural Entomology and Pest Management, Forest Entomology, Stored Products and Structural Insects, and Pesticide Development, Management and Regulation.

A Congress Brochure and application forms will be mailed in May, 1975. The Brochure will contain information on highlights of the scientific program, receptions, tours, ladies program, scientific, historical and other features of the Washington area, and useful data for visitors.

**PLEASE NOTE:** Announcements of this Congress are not being sent to individuals, but are being publicized in journals and circulated to museums, departments, and other institutions. If you are interested in receiving future information, including registration forms, please send a postcard to the undersigned with your name and address, typed or in block letters, and also the section of your major interest.

Dr. Ernest C. Bay, Secretary General  
XV International Congress of Entomology  
P.O. Box 151  
College Park, Md.  
USA 20740

## EMPLOYMENT

The Entomological Society of Canada maintains a list of employment opportunities in Canada for members, and has an employment office at annual meetings of the Society. Positions wanted and available are published in the **Bulletin**. Forms for the use of prospective employers and employees are available on request. Those seeking employment through and filing curricula vitae with the Employment Committee will please indicate their membership in the ESC.

### POSITIONS WANTED

Recent Ph.D. graduate desires position in research or teaching. Special interests: taxonomy, systematics, and biocontrol. Has worked with Lepidoptera and Coleoptera. Ref. No. 30-2-74.

Canadian, Ph.D. expected June 1975 from Cornell, desires employment with Government or University, in Insect Pest Management, or Natural Control of Insect Populations. Ref. No. 49-3-74.

Canadian, fluently bilingual in French and English, M.Sc. degree University of Montreal, desires employment immediately with university, industry or government. Special interests in insect development and Odonata. Ref. No. 50-4-74.

Please direct all inquiries and correspondence to: A. G. Robinson, Chairman, Employment Committee, Entomological Society of Canada, Department of Entomology, University of Manitoba, Winnipeg R3T 2N2.

Do not direct inquiries to the **Bulletin**.

### POSITIONS AVAILABLE

Applications are invited for three faculty positions in the Department of Entomology. Starting date for the positions is 1 September 1975.

1. **Economic Entomology:** Teaching insect control to undergraduate majors and graduate students. The successful candidate will be expected to develop a strong research program and to supervise graduate students.
2. **Extension Entomology:** Primary responsibility for the insect pest complex on tree fruit, including work with the commodity group through regional fruit extension specialists and adaptive studies on control at the Experimental Fruit Facility. No instructional assignments initially; however, opportunity for supervision of graduate students and teaching may become available after 1-3 years. Can be filled before September 1975.
3. **Medical Entomology:** A mosquito biologist or mosquito control specialist preferred. Teaching general entomology and medical entomology. The successful candidate will be expected to develop a strong research program and to supervise graduate students. Also must advise on mosquito abatement techniques and materials.

Credentials shall include a resume of training and experience, transcripts, list of publications (reprints desirable) and names of 3 references.

T. M. Peters, Head, Department of Entomology, University of Massachusetts, Phone (413) 545-2285.

## PERSONALIA

W. G. Wellington has been appointed Director of the Institute of Animal Resource Ecology at the University of British Columbia, as of 1 July 1974. This is a change from the "Acting" status of the previous twelve months.

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Buzz Holling returns from his sabbatical in Vienna on 15 August and will be actively teaching and doing research in the Institute of Animal Resource Ecology thereafter.

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Professor A. W. Baker, retired former Head of the Department of Entomology and Zoology, Ontario Agricultural College, and Honorary Member of the ESC, and Professor H. W. Goble, who retired from O.A.C. in December 1972 were named Professors Emeritis at the spring 1974 convocation of the University of Guelph.

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Dr. Evert E. Lindquist, an acarologist in the Biosystematics Research Institute, was recently honored by the Ohio State University when he was presented with the seventh "Annual Acarology Award". The award was made "in recognition of his outstanding work on the systematics of Acari and his contributions to the teaching program of the Ohio State University Acarology Laboratory". His contributions have been particularly significant in the taxonomy and biology of Gamasina and Tarsonemina. Evert is the first Canadian to receive this award.

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R. L. Horsburgh has been appointed an Associate Professor and Extension Specialist in Entomology at Virginia Polytechnic Institute and State University, and will be located at the Shenandoah Valley Research Station. Dr. Horsburgh served the past 14 years with the Nova Scotia Department of Agriculture and Marketing.

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A. W. A. Brown, Michigan State University, John A. Hanna Distinguished Professor, has received the "medal of honor" from the American Mosquito Control Association. The award was made at AMCA's Annual Meeting at Anaheim, California. Dr. Brown received the award in recognition of his development of methods of mosquito control and his demonstrations of the resistance of mosquitoes to insecticides.

### PHOTO SALON

Members and friends of the Society are reminded of this annual event. The next Salon will be held at Saskatoon in mid-August 1975, and exhibitors should plan early. Details will appear in the March 1975 Bulletin.

R. Brust