
ENTOMOLOGICAL SOCIETY OF CANADA

Bulletin



VOL. 6

MARCH

No. 1



ACTION REQUESTED
PP. 18, 19, 21, 25

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.

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

Editorial

FINANCE

The Finance Committee had many important recommendations in its well-researched report to the February 1974 meeting of the Governing Board. Inflation has placed a whole new perspective on our financial position. The printing charges for the *Canadian Entomologist* have suddenly doubled and other operating costs are rising rapidly. Our cash reserve, wisely established several years ago on the recommendation of the Finance Committee, is eroding because the inflation rate exceeds the interest rates.

The Board decided to (1) set aside annually a percentage of the capital reserve equivalent to the rate of inflation, (2) to augment the capital reserve fund to eventually provide enough interest to operate most of the Society's miscellaneous expenditures, (3) to convert low-yield bonds to higher yielding investments, and (4) to authorize the purchase of the Society's own building as an investment. The last is potentially controversial, but most of the space would not be needed and would be rented, thus providing income as well as security. The decision does not preclude participation in the proposed House of Science and Technology because the Society can always move and rent the space thus vacated.

SCHOLARSHIP

The Board of Governors has taken a very important step in the direction of the Society's objective to study, advance, and promote entomology. At the February 1974 Board meeting at Ste. Anne de Bellevue, they approved the establishment of The Entomological Society of Canada Scholarship Fund. The Fund is to support a substantial scholarship, but until the Fund is adequate, a lesser annual Entomological Society of Canada Award will be provided. Application is to be made for charity status so that donations are deductible from income for tax purposes. Add to the accomplishments of Brian Hocking, whose Gold Medal Address pointed the way, for bringing this long dormant ambition of the Society to fruition. We drink too much coffee anyway.

The photographs on pages 132 and 133 of volume 6, December 1963, should have been credited to Evan T. Gushul R.B.P., Lethbridge.

ENTOMOLOGICAL SOCIETY OF CANADA

GOLD MEDAL



Awarded to **Dr. Philip Corbet**

Dr. Philip S. Corbet has been awarded the Entomological Society of Canada Gold Medal for Outstanding Achievement in Canadian Entomology. The presentation will be made in August, 1974, when the Society holds its Annual Meeting in Halifax in conjunction with the Acadian Entomological Society.

Dr. Corbet obtained a Ph.D. in Entomology from Cambridge University in 1953 and a D.Sc. in Zoology from Reading University in 1962. From 1954 to 1962 he worked in Uganda where he specialized in studies on the ecology and behaviour of aquatic insects with particular reference to the role of mosquitoes as virus vectors. From 1962 to 1971 he was associated with Agriculture Canada, as a research scientist at the Entomology Research Institute, Ottawa, and subsequently as Director of the Belleville Research Institute. In 1971 he became Professor and Chairman of the Department of Biology, University of Waterloo, Waterloo, Ontario.

Professor Corbet's entomological achievements are numerous. He has published more than 125 scientific papers and is the author of several books. He is a world authority on the ecology and behaviour of aquatic insects, particularly dragonflies, and a pioneer in the concept of pest management. His ideas have been orally conveyed at many national and international scientific meetings. He has also found time to be active in the affairs of the Entomological Society of Canada, being on the Governing Board from 1969-73 and President in 1971-72. In addition, he has served on numerous national and international committees concerned with insect control. His work has undoubtedly had public impact beyond the academia. His early research on disease vectors in Uganda and his later studies on mosquitoes in northern Canada had clear implications for public welfare. In the mid 1960's he led the research team which advised Expo 67 on the shadfly nuisance. Latterly, he has served as an advisor to the World Health Organization and the Rockefeller Foundation on vector biology in East Africa and Brazil. His Entomological Society activities including strong support of the resolution on population limitation and resource use and fostering and compilation of the Society statement on Pesticide Use Policy can be considered as landmarks in the development of the Entomological Society of Canada's role in Canadian society.

Dr. Corbet is the 13th recipient of the Society's Gold Medal.

ROBERT GLEN



Robert Glen was born 20 June 1905 at Paisley, Scotland, and emigrated to Saskatchewan in 1912. He attended elementary schools in Scotland and Canada and secondary school at Mildren High School, Mildren, Saskatchewan, and the Provincial Normal School, Saskatoon. He was awarded the B.Sc. with honors in biology (1929) and the M.Sc. in Entomology (1931) from the University of Saskatchewan. During these years he had already laid the groundwork for a career in entomology and eventually, in entomological and agricultural administration.

At his uncle's farm he was introduced to farming practices and incidentally developed a bias for Clydesdale horses, horse racing, and attendance at local sports days. At ten he was riding in horse races, at first bare back and later with jockey silks and the four-pound saddle. His favourite mount was "Auntie" which he fairly frequently led to victory over the finish line! Horse racing was only one of young Glen's competitive sports and he still speaks nostalgically about experiences in baseball and intercollegiate hockey.

He spent two years as a country school teacher, also doing the janitorial work at the school; weekend trips to his home, about 8 miles away, were on a borrowed horse. As a spare time activity Bob "fiddled" in a dance orchestra. At the end of his first year at university he obtained a summer job selling groceries from a wholesale house in Saskatoon to farmers in the Assiniboia district. This necessitated the purchase of an old Model T Ford whose thin tires had to be protected by lacing old discards over them. The car had to double as a bedroom except on weekends when Glen was fortunate enough to obtain fee accommodation on a stack of mattresses in an attic above a funeral establishment. The need for companionship and the prospect of a pay cheque in the mail propelled him into Assiniboia every Saturday night and Dr. Glen tells me that on one occasion he arrived on two rims and with an empty gas tank! But he insists it was a memorable summer, and the commissions that trickled through the ensuing months made his university life replete.

Glen went to university simply to seek more education, eventually settling on biology as a direct result of the stimulation of Dr. W. P. Thompson, and entomology because of the satisfaction found in the summer recess in 1928 at the Dominion Entomological Laboratory at Saskatoon.

Upon graduating from the University of Saskatchewan in 1929, he obtained full-time employment at the Dominion Entomological Laboratory, on the University Campus, under the direction of Dr. Kenneth M. King. The program of the laboratory was focused on the control of grasshoppers, wireworms, cutworms and the wheat-stem sawfly and the approach was essentially ecological, i.e., the reduction of pest populations and damage by means of modifications of common farm practices although pesticides were also generally used against grasshoppers and several species of cutworms. During the sixteen years that he spent at the laboratory, Glen's responsibilities touched on a number of aspects, general insect surveys, grasshopper surveys and control campaigns, and university teaching. He was included in staff meetings at which program priorities, the allotment of resources, and the philosophy of research in the government service were discussed, and was introduced to team work and scientific

writing including joint authorship. This diversity of experience was invaluable to him in later years when he became heavily involved in research management.

But his main concern was with wireworms and studies on their morphology and taxonomy which led to the M.Sc. (Saskatchewan, 1931) under Dr. L. G. Saunders, and the Ph.D. (Minnesota, 1940) under Dr. C. E. Mickel. In 1936 he was assigned responsibility for wireworm investigations in the prairie provinces. From this activity emanated a series of important papers on the practical or applied method of coping with wireworms and measuring their abundance and rates of damage, and an academic investigation of their morphology and taxonomy. Special support for this latter aspect was provided by a transfer of work for seven months in 1937-38 to the United States National Museum, Washington, D.C., where Glen benefited from the use of the collection of larval Elateridae and from association with Dr. Adam G. Boving, world-ranking authority on coleopterous larvae. This resulted in a major monograph published in 1950 by the Smithsonian Institution. Though he performed nobly in his own research, especially that on wireworms, Dr. Glen would probably consider that his major contributions were in the field of research administration in entomology, and later in the broad field of agricultural management in the higher levels of government, at home and abroad.

In 1945, because of departmental recognition of his talents and potential, he was transferred to Ottawa. His first task was assessing the research program of the Entomology Division; an extensive series of working parties and meetings was arranged to clarify and enunciate Divisional policies respecting the nature and scope of research, extension, and other public service activities. This was a period, largely through Glen's influence, of rapid and effective staff expansion, of awareness of the problems of others, and of communications between interested parties. There was emphasis on improving research staff and facilities, of attendance of officers at appropriate conferences, and on raising the quality of scientific writing. In 1950 Dr. Glen became chief of the Entomology Division, a post that he held for seven years. During this period Canada became host to the Tenth International Congress of Entomology, with Dr. Glen as Vice-President of the Congress. Also during this period the number of units into which the Entomology Division was divided became consolidated from six to three to strengthen internal coordination and leadership. The Advisory Committee on Entomological Research of the Defence Research Board, founded in 1947, was very active at this time, and, under Glen's chairmanship, greatly increased our knowledge of biting flies and other insects across Arctic and Subarctic Canada and Alaska.

Glen's involvement with the broader field of agricultural research began in 1946 with the appointment of Dr. K. W. Neatby as Director of Science Service. Dr. Neatby immediately set about restructuring the Service particularly through the provision of multidisciplinary research laboratories and improving the status and salaries of scientists in the Federal Civil Service. Opportunity was provided under Neatby's leadership for Glen to make a personal contribution to these endeavours and to the formation of the Research Branch of the Department of Agriculture in 1959 for which Glen was a member of the four-man planning team. In 1957 he was appointed Associate Director and later, following the tragic and premature death of Dr. Neatby, served as Director of Science Service until its dissolution in 1959 with the formation of the new Research Branch. Dr. Glen was the first Director General of the Research Branch, a post he held until 1962 when he was promoted to Assistant Deputy Minister (Research) for the Department of Agriculture. From 1959 until his retirement from the Canadian Public Service in 1968, Glen was concerned with consolidating

and streamlining the new Branch and improving cooperation with Canadian Universities and Provincial Departments of Agriculture with the long-range objective of achieving an integrated policy and program for agricultural research and development in Canada. Through the Canadian Agricultural Services Coordinating Committee and the Federal Interdepartmental Committee on Pesticides both of which benefited from Glen's leadership, mutual agreement was reached on the basic roles of the universities and of provincial and federal departments in an integrated approach to agricultural research and services for Canada.

When Dr. Glen retired from the Canadian Public Service he could look back with pride on a career of leadership, productivity and influence that has seldom been matched. But then he embarked on another career with the Commonwealth Secretariat in London, England, where he was concerned primarily with the work of the Commonwealth Scientific Committee (CSC) as Secretary and Scientific Advisor. The broad aim of CSC is to promote collaboration between civil scientific organizations of Commonwealth governments. Dr. Glen approached this objective through biennial meetings of CSC and visits to member countries. He placed emphasis on providing the scientific agencies of developing Commonwealth countries with information and advice, on assisting in the planning of their research and development activities, and in identifying sources of funds.

He encouraged countries to make formal requests for assistance from the CSC secretariat, for the training of scientific and technological personnel, for the procurement of specialized information, and for guidance in managing limited research resources. He made a good beginning at identifying potential fields of cooperation, i.e., specific areas in which some countries were ready to declare their willingness to provide assistance, while other countries were prepared to request such assistance. This brought out the fact that about half of the less-developed countries were able to provide assistance to others less fortunate.

Perhaps the most significant work he attempted was the strengthening of the internal structure for scientific development in the less-developed countries. At the time of the termination of Glen's appointment in 1972, 17 of the 22 member countries in CSC had already formed or were in the process of forming a national advisory science body. Only three were in existence prior to 1966.

During his long career Dr. Glen has been the recipient of many honours and awards in addition to those mentioned earlier in this account. Among these are the Caleb Dorr (1931-32) and Shevlin Fellowships (1932-33), which he was awarded at the University of Minnesota. He was elected a member of Sigma Xi (1933). He received an honorary L.L.D. at the University of Saskatchewan (1959) and an honorary D.Sc. at the University of Ottawa (1960). He received the outstanding achievement award, University of Minnesota (1960); the Certificate of Merit, Eastern Branch of the Entomological Society of America (1964); and the Gold Medal for Outstanding Achievement of the Entomological Society of Canada (1964). In 1967 he received the Medal of Service, Order of Canada. He was President of the Eastern Ontario Branch of the Agricultural Institute of Canada (1950-51). He was President of the Entomological Society of Canada (1957) and President of the Entomological Society of America (1962). He was elected Fellow of the Agricultural Institute of Canada (1957) and Fellow of the Royal Society of Canada (1960). He was a member of the Science Council of Canada (1966), Foreign Associate, Applied Biology Section of the U.S. Academy of Sciences (1967), Fellow of the Entomological Society of Ontario (1969), and Honorary Member of the Entomological Society of America (1972). He was a

member of the Editorial Committee, Annual Review of Entomology (1956-60) and was elected Honorary Life Member of the Canadian Seed Growers' Association (1968).

Robert Glen married the former Margaret Helen Cameron of Regina in 1931; they have two sons, Robert Cameron of Ottawa, and Ian Robert of Vancouver. The Glens are now retired and live at 4323 Juniper Place, Victoria, B.C.

What carried Dr. Glen so far in his profession? An old friend and associate of his said, "He has a keen mind and a delightful and engaging personality and a wonderful sense of humour. There is not an ounce of meanness in Bob." Other biographers have paid tribute to his faculty for clear thinking, long range foresight with a probing scholarly mind, for his grasp of the philosophical and conceptual bases of scientific research, and above all for his concern with his fellow men. It has been pointed out that few people have influenced entomology and agricultural science in Canada as much as Dr. Robert Glen. We, the grateful entomologists in Canada and abroad, wish him and Mrs. Glen long life and much happiness.

C. P. Holland

EPIGRAM ON THE EMBLEM OF THE SOCIETY

(A doodle done during duties and deliberations by the President)

The Latin word *emblema* implies an allegorical design. It comes from the Greek, meaning "a thing put on" and is derived from *emballein*, "to throw in". This seems appropriate, as the following was certainly thrown in; it was also something of a "put-on".

Emblema: The Living Fossil of Sulphur Mountain

The emblem of the Society
was selected with propriety.
It does not matta
that *Grylloblatta*
campodeiformis
is not enormis.
Our interest lies,
not in its sies,
nor its lack of ubiquity,
but in its antiquity:
it's as old as the hills
upon which it dwills!

The "inspiration" came one dinner-time at the joint meeting of the Society with the Entomological Society of Alberta at Banff, October, 1973, following an examination of some immature specimens of *Grylloblatta* obtained for the meeting from the nearby type locality, Sulphur Mountain.

Dinner-time ditties depend on the Muse,
Not upon moments to spare — nor on booze!

On receiving his service award, bearing the insignia of the Society, on his retirement from office, the President unwisely chose to make public his ditty, which is here published in response to the popular acclaim of a couple of misguided members.

ANTI-GRASSHOPPER DEFENCES THINNED

Dean Seyward Smith retired 27 December 1973, after more than 35 years of entomological service with Agriculture Canada.

Seyward was born in Ontario but spent most of his early years in Manitoba. He obtained his B.Sc. (honors) in zoology and chemistry in 1937 from the University of Manitoba. During his senior years, he won the Isbister Scholarship that was awarded for the highest marks in the university. Seyward went on to take graduate studies at the University of Minnesota, where he obtained his M.Sc. in 1948 and his Ph.D. in 1958.



In 1936, Seyward began his employment with the Department as a summer assistant with the Dominion Entomological Laboratory at Brandon. He continued to work there until 1941, when he joined the RCAF, subsequently attaining the rank of Flight Lieutenant. In 1945, Seyward returned to the Brandon Laboratory and, four years later, moved to Lethbridge to take over grasshopper research and survey in the Crop Entomology Section.

Seyward's research included studies on insect ecology and nutrition. He showed that fertilizers and species of host plant have major effects on grasshopper numbers. His work on insect nutrition placed him among the pioneers of this field. He developed methods for rearing 'hoppers and adapted hydroponics to produce chemically uniform wheat plants. He also found that crowding increased grasshopper numbers rather than decreased them.

Seyward was responsible for the annual grasshopper survey and prepared the forecast for an area of about 50,000 square miles in Alberta and southeastern British Columbia. Recently he taught fieldmen from about 30 municipalities to do the survey.

Until his retirement he was one of two grasshopper experts left in the Branch. He has agreed to publish a paper covering the changes in grasshopper populations in Alberta since the surveys began in 1932.

The Smiths have two married children, Carol and David. Seyward and his wife Marion ran the Lethbridge Music Festival for many years. Seyward has served on the Library Board for Lethbridge since 1965 and is still serving in that capacity.

Seyward completed his 35 years of service 6 October 1973. Although he could have continued working for several years, he wants to enjoy his many cultural interests while still a relatively young man. Seyward and Marion will continue to live in Lethbridge.

N. D. Holmes

PROTEIN ASSAY WITH MEALWORMS

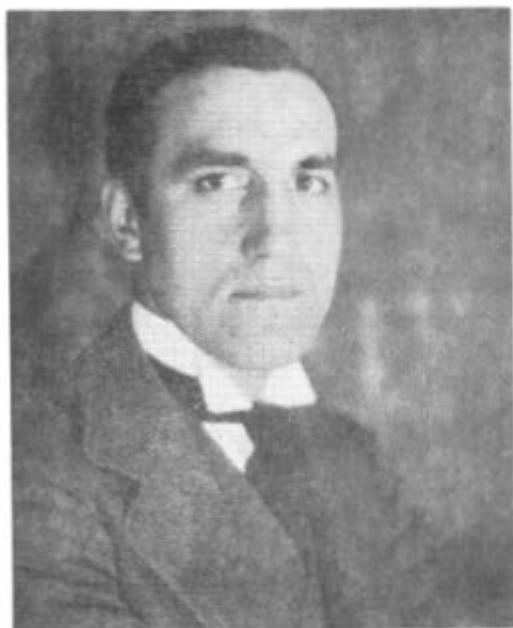
Tenebrio larvae are well-suited for testing the nutritive value of proteins, writes G. R. F. Davis in an article in *Canada Agriculture*, Fall 1973. Classification of soybean, sunflower, turnip rape, safflower, rape and flax meals using yellow mealworms was essentially the same as by using mice. In general nutrition investigations, these insects can give an indication of food quality at minimal costs in terms of technical help and space required.

ACTIONS OF THE GOVERNING BOARD

19-21 February 1974

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|------------------------|---|
| External Affairs | 1. Ratified the submission of the names of three Society members through the Biological Council of Canada as nominees for NRC Grant Selection Committees on Plant Biology, Population Biology, and Animal Biology. |
| | 2. Noted that the biographies and citations of the Society's 12 Gold Medallists have been forwarded to the Information Services, Ministry of State for Science and Technology for inclusion in the third volume of articles on "Canadian achievements in science and technology". |
| By-Laws | 3. Decided to revise and simplify the By-Laws further, incorporating more of the details in a revised set of Rules and Regulations, and not to include the revised By-Laws for decision on the next mail ballot. |
| Fellowships | 4. Agreed to publish in the Bulletin a proposed mechanism for choosing Fellows of the Society so that the members could present their reactions to the Board, and to place this proposal later before the membership for vote. |
| Headquarters | 5. Approved recommendations of the Finance Committee for improving the Society's investment income, including the purchase of a building to a maximum price of \$100,000. |
| Secretary | 6. Agreed to provide up to \$3000 to the Secretary for hiring part-time secretarial help rather than establishing a post of Executive Secretary. |
| C. Gordon Hewitt Award | 7. Approved the establishment of the Entomological Society of Canada C. Gordon Hewitt Award for Outstanding Achievement in Entomology for entomologists under 40 years of age, and agreed to place this item on the next mail ballot. |
| Scholarships | 8. Approved the establishment of "The Entomological Society of Canada Scholarship Fund" which will initially provide an annual "Award" of \$500 to a worthy full-time postgraduate student specializing in entomology at a Canadian university and which will later be increased to a \$2000-3000 "Scholarship", as funds become available. |
| Manpower Study | 9. Established a committee comprising Drs. C. R. Harris, F. L. McEwen and W. J. Turnock to investigate ways of implementing a manpower study. |
| Extension and Research | 10. Requested Dr. W. J. Turnock to prepare a brief on the present operating interrelation between entomological research and extension in Manitoba as a guide for a proposed nationwide survey. |
| Faunal Survey | 11. Approved the forwarding of a proposal for "a biological survey of the insects of Canada" (with an annual budget of more than one million dollars) to the Biological Council of Canada. |

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| Archives | 12. Noted that an agreement for the transfer of the Society's Archives to the Public Archives of Canada will soon be drawn up for presentation to the Board. |
| Science Policy | 13. Requested that Drs. R. K. Stewart and E. G. Munroe attend the meeting of SCITEC on 2-3 May, a forum on science policy dealing mainly with Volume III of the Lamontagne Report. |
| | 14. Requested the Science Policy Committee to amend its recommendations on the Contemporary Role and Responsibilities of the Society and to make a feasibility study of implementing them. |
| Achievement Award | 15. Announced that Philip S. Corbet is the recipient of the Achievement Award in 1974. |
| Common Names of Insects | 16. Noted that the revision of the trilingual list of Common Names of insects being prepared by the Quebec Society for the Protection of Plants has proceeded too far for participation by our Society and requested that Mr. J. E. H. Martin confer with Mr. Paul Benoit, Secretary, Comité des noms français des insectes d'importance économique au Canada, about publishing sufficient copies for distribution to members of the Entomological Society of Canada. |
| Photo Salon | 17. Agreed that the prizes for winners in the Insect Photo Salon be certificates and ribbons rather than shields. |
| Insect Colonies | 18. Agreed that the list of Insect Colonies be available from Dr. J. S. Kelleher on request rather than being published every second year in the Bulletin . |
| Membership | 19. Noted that membership has increased a little in each of the last two years. |
| | 20. Requested that the Membership Committee examine the practicality of publishing a membership list in the Bulletin every second year and consider other less expensive ways, such as having an updated list available on request. |
| Essay Contest | 21. Noted that there had been a poor response in quantity and quality to the Essay Writing Contest, did not favour continuing these contests, and requested the Committee on Publicizing Entomology to investigate other means of achieving its objectives. |
| E.S.O. | 22. Asked the President to appoint a committee of Ontario members of our Society to meet with the ESO-ESC Liaison Committee of ESO to explore ways of better combining our efforts for promoting entomology and entomologists in Ontario. |
| Annual Meetings | 23. Noted that plans are well advanced for the next two Annual Meetings — the one on 26-29 August 1974 with AES in Halifax, N. S. and the one on 17-21 August 1975 with the ESS in Saskatoon, Sask. |



DR. C. G. HEWITT

In the Entomology Library of the Biosystematics Research Institute, Ottawa, there is a bronze bust of Dr. C. G. Hewitt inherited from the former office of the Dominion Entomologist (Chief, Division of Entomology) and inscribed as follows:

Charles Gordon Hewitt, D.Sc.
1885-1920

Second Dominion Entomologist 1909-1920
Noted architect of Canadian entomology
Drafted the Destructive Insect and Pest Act — 1910
Established the first field laboratories — 1911
Organized the Entomological Branch — 1914

Gordon Hewitt's scientific career extended over only eighteen years, from his appointment as assistant lecturer at the University of Manchester in 1902, to his untimely death, after eleven years of service as Dominion Entomologist, in 1920. He was the author of numerous papers on the bionomics and economic significance of insects of many groups (Diptera, Hymenoptera, Hemiptera, thrips, phytophagous mites, ticks) but is best remembered, perhaps, for his early work in England on the natural enemies of the larch sawfly that led directly to the introduction and establishment of the ichneumonid *Mesoleius tenthredinis* in Canada in 1911, and for his important book *The House-Fly* (Cambridge U.P., 1914, 382 pp.).

As a scientific administrator he established the framework that was to regulate the development of entomology in the Canadian government service for the next 50 years. The Destructive Insect and Pest Act, which he drafted in 1909-10, was the first legislation of its kind in Canada. Under this Act, also, funds became available for the establishment and staffing of field laboratories. Nine entomological laboratories from Nova Scotia to British Columbia had

been established by 1914; they were organized into an Entomological Branch, divided into disciplinary sections, and these arrangements persisted, in essence, until the establishment of the Research Branch in Canada Agriculture in 1960. Hewitt also had wide biological and faunistic interests, and was a pioneer of the conservation movement. He served on a number of early commissions for the protection of nature, both nationally and internationally, and was the author of *The Conservation of the Wild Life of Canada* published post-humously in 1921 (Scribner's, New York).

(Prepared by Mr. J. A. Downes.)

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- Gibson, A. and J. M. Swaine. 1920. Charles Gordon Hewitt, Can. Ent. 52: 97-105.
Glen, R. 1956. Entomology in Canada up to 1956. Can. Ent. 88: 290-371.
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THE C. GORDON HEWITT AWARD for Outstanding Achievement in Entomology

A recommendation for the establishment and administration of this new category of achievement award, prepared and submitted by P. S. Corbet and C. R. Harris and adopted by the Governing Board at its meeting in 19 February 1974.

A need has been recognized for the Society to be able to recognize and encourage exceptional contributions to entomology made by active members early in their career. The existing or envisaged categories of recognition — The Gold Medal and the Fellowship class — lean strongly (and correctly in our view) toward the recognition of entomologists who have already become firmly established in a career and who therefore are almost invariably over 35, and normally over 40, years of age. It is our feeling that the Entomological Society of Canada should recognize outstanding performance among entomologists under 40.

Proposal

We propose that the Society establish an award, to be known as "the C. Gordon Hewitt Award," to be awarded to entomologists under 40 who, in the estimation of the evaluators, are most worthy of recognition among those who qualify for such recognition.

We propose further that:

The administration of the award be conducted by the same members of the Society as now administer the Gold Medal award, and according to the same procedures and time-table with the exception that no address be required.

The terms of reference for the C. Gordon Hewitt Award be the same as those for the Gold Medal except that they contain the provision that, to be eligible, a member must be less than 40 years of age throughout the calendar year in which the award is both announced and awarded.

The Society make funds available in an appropriate amount to permit the manufacture of a suitably inscribed plaque.

That the award be announced in the Society's *Bulletin* at the same time as the award of the Gold Medal is announced, and that it be amplified by a citation and a photograph.

Entomological Society of Alberta

Banff, Alberta, 1973



Entomological Society of Canada

as seen by Evan J. Gushul



COMMITTEE REPORTS

REPORT OF THE INSECT PHOTO SALON COMMITTEE

There were 14 entries and a total of 36 photos submitted to the contest. One entry came from West Germany, the rest from Canada (Alberta, Saskatchewan, Manitoba, Ontario).

On the strength of this year's (1973) response I feel that the Photo Salon should be continued. I believe that with the same amount of publicity next year, we could easily double the number of entries.

The Committee met on Jan. 23 to draw up the rules for the 4th Annual Photo Contest. The committee decided to have 4 categories: Black and White prints, Color prints, Color slides, and Photomicrographs. Also, a best in Salon Certificate would be presented. In order to reduce costs, the committee elected to give out certificates and ribbons. Several people are working on a design for the certificate, and as soon as this is completed, we will get cost estimates for a 3 year supply.

R. Brust, Chairman

REPORT OF THE REPRESENTATIVE TO B.C.C.

At the meeting of the Biological Council of Canada held in March 1973, the President, Dr. M. Shaw, drew attention to a summary of activities of B.C.C.

Society members of B.C.C. were asked to nominate members for the N.R.C. Grant Selection Committees. Nominations from the Entomological Society of Canada have been dealt with by the Executive.

A meeting has been held to achieve closer co-operation or possible union of B.C.C. and C.F.B.S.

It was moved that "The B.C.C. should participate in and strongly support SCITEC, and apply for admission to the House of Science and Technology thus accepting responsibility for providing an active voice for Biology for all its member societies". At present membership in HOST requires that a society must have at least 1500 members (or be an umbrella society whose total membership is 1400 members or greater).

SCITEC fees will be lower for the whole B.C.C. than they would be for B.C.C.'s member societies.

A request was made for reports to various task forces of the Canadian Council of Resource and Environment Ministers. The Science Policy Committee of ESC has responded to this and copies of the reports have been distributed to the President and the Secretary of ESC.

A number of B.C.C. reports are in preparation for distribution. On completion they will be printed and bound and sent out to all those on the B.C.C. publicity mailing list. These reports are summarized in the June 1973 Newsletter from B.C.C.

Omissions from the publicity mailing list of B.C.C. have been brought to the attention of the B.C.C. Secretary.

At the March meeting the President of B.C.C. was asked if an enquiry could be made, through B.C.C., about the apparent lack of action by Agriculture Canada following the recommendations of the work-planning meeting on

Biting Fly Research and Control and Environmental Quality. The president referred the matter back to ESC as being more properly of direct concern to it than to B.C.C.

The matter of adequate representation on B.C.C. according to the size and therefore, the financial contribution of member societies is still under consideration. It will be raised again at the October (1973) meeting of B.C.C.

Anne Hudson

ELECTION 74

The following is the slate of nominations for election put forward by the Nominations Committee:

President-Elect:

G. S. Cooper,
Cyanamid of Canada,
Scarborough, Ont.

G. Pritchard,
Dept. of Biology,
University of Calgary.

Directors-at-Large:
(Two to be elected)

R. K. Stewart, Dept. of Entomology
Macdonald Campus, McGill Univ.

J.-J. Cartier,
Agriculture Canada, Ottawa.

J. S. Kelleher,*
Agriculture Canada, Ottawa.

G. C. E. Scudder, Dept. of Zoology,
University of British Columbia.

(* Pending confirmation of willingness to stand.)

Nominations from the membership were called for by the Secretary in Bulletin 5(4):125.

G. E. Ball
R. O. Paradis
D. K. McE. Kevan (Chairman)

LARCH CASEBEARER

Forest insect specialists from Canada and the United States held joint strategy talks in Washington State 29, 30, and 31 January 1974 to coordinate efforts in finding a control for the larch casebearer — a forest pest which is causing extensive damage to larch stands in southeastern British Columbia and the northwestern states. For further information contact D. R. Macdonald, Pacific Forest Research Centre, 506 W. Burnside Rd., Victoria, B.C.

HOW TO ENCOURAGE STUDENTS

The following is from the report of the Committee for the Encouragement of Youth of the Entomological Society of Manitoba, L. B. Smith, chairman, A. J. Kolach and T.V. Cole. It describes a commendably active and effective program — Ed.

This year 50 kits were made up for junior collectors. For \$4.75 we were able to include a styrofoam spreading board in addition to the clear-top polystyrene box, 2 ounce bottle of ethyl acetate, 100 insect pins, instruction booklet and key to the orders of insects.

Publicity was increased this year and resulted in the sale of 36 kits compared to 8 in 1972. The channels used were the newsletter of the 4-H Clubs, *Contact* in which notices were run in May and August, a feature article in the Leisure section of the *Free Press* at the end of July, and advertisements in the *Fort Lance* and *Viewpoint*, newspapers that are sent to homes in the South Winnipeg area. The main number of sales resulted from people reading the feature article in the *Free Press*, followed by the notice in *Contact*.

Most of the young people who obtained kits were working on insect projects assigned by their teachers. It is hoped to arrange a workshop for these people and interested teachers in the early part of 1974 to allow an informal exchange of ideas, experience and problems. Funds have been obtained to arrange this meeting from the Committee on Student Encouragement of the Entomological Society of Canada.

In addition, a seminar on insects was presented twice at the Winnipeg Schools Science Symposium in May and a display was prepared for the open house at the Museum of Man and Nature in May, in response to an invitation from the Museum. The Chairman also spoke on insects to three classes of students at Gordon Bell High School in September.

WORKSHOP ON INSECT PESTS OF RAPE

25-26 October 1973

A second workshop on insect pests of rape was held at Winnipeg to continue to improve communications among those involved in rape protection. The first such meeting, at Saskatoon in January 1973 had set goals and laid the groundwork for this workshop. The objectives were to provide a forum for the exchange of information, and for the identification of problems and priorities leading to better coordination of research, monitoring and prediction. Fifty people from 18 federal, provincial, industrial and university agencies attended.

The mimeographed report of the meeting documents: progress on research goals, plans for 1974, factors affecting abundance of bertha armyworm, and research priorities. The participants concluded that better coordination and standardization of sampling and forecasting among provinces is needed.

Another meeting is planned for the fall of 1974. Interested persons should contact W. J. Turnock, Agriculture Canada, Research Station, 25 Dafoe Road, Winnipeg, Manitoba, R3T 2M9.

JOINT ANNUAL MEETING

Entomological Society of Canada
Acadian Entomological Society

Dalhousie University, Halifax, N. S.

Halifax, N. S.

26-29 August 1974



Feature Symposium
(Tuesday, 27 August)

ENTOMOLOGY AND THE ENVIRONMENT

The Honourable Eugene F. Whelan, Minister of Agriculture, Canada.
(Attendance subject to government exigencies). *An appraisal of the entomological effort in Canada.*

Dr. Christian de Laet, President/Director General, International Bureau for Professional Development. *Entomological environmental issues in agroecosystems.*

Mr. Barney W. Flieger, President, Forest Protection Limited. *Large scale application of pesticides.*

Dr. John R. McLintock, President, Entomological Society of Canada.
The aims of Canadian entomologists to assure increasing production capabilities with lessening environmental impact — a sense of direction.

Annual General Meetings

The annual general meetings of both societies will be held during the meeting.

Ladies Programme

A ladies programme will be provided with special provisions for children.

See participation requests, pages 18 to 21.

SPECIAL INTEREST GROUPS

The following topics are under development. If you have a desire to participate in any of them, please contact the moderator, or where he has not been named, the alternative contact given.

1. **Contemporary Role and Responsibilities of the Entomological Society of Canada**
Moderator: W. J. Turnock, Research Station, Agriculture Canada, 25 Dafoe Road, Winnipeg, Manitoba R3T 2M9.
2. **Management of Tree Fruit Pests**
Moderator: E. A. C. Hagley, Research Station, Agriculture Canada, Box 185, Vineland Station, Ontario L0R 2E0.
3. **Survey and Monitoring Techniques**
 - A. Agriculture
Moderator: J. H. H. Phillips, Research Station, Agriculture Canada, Box 185, Vineland Station, Ontario L0R 2E0.
 - B. Aquatics
Moderator: D. C. Eidt, Maritimes Forest Research Centre, Canadian Forestry Service, Box 4000, Fredericton, N. B. E3B 5G4.
 - C. Forestry
Moderator: Gary A. Simmons, 316 Deering Hall, University of Maine, Orono 04473.
 - D. New Techniques
Moderator: D. O. Greenbank, Maritimes Forest Research Centre, Canadian Forestry Service, Box 4000, Fredericton, N. B. E3B 5G4.
4. **New Tactics in Spruce Budworm Control**
Moderator: E. G. Kettela, Maritimes Forest Research Centre, Canadian Forestry Service, Box 4000, Fredericton, N. B. E3B 5G4.
5. **Recent Advances in Pheromone Research**
Moderator: W. D. Seabrook, Department of Biology, University of New Brunswick, Fredericton, N. B.
6. **Pesticide Activity**
Moderator: D. C. Read, Agriculture Canada, Box 1210, Charlottetown, P.E.I., C1A 7M8
7. **Potato Insect and Disease Vector Management: Especially Aphids**
Moderators: M. E. MacGillivray, Agriculture Canada, Box 280, Fredericton, N.B.
R. H. Storch, 207 Deering Hall, University of Maine, Orono 04473
8. **Effectiveness of Information Flow: Research - Extension - Producer**
Moderator: A. J. McGinnis, Agriculture Canada, Box 185, Vineland Station, Ontario L0R 2E0.

Further information on special interest groups will be mailed to all members of ESC on 25 March 1974.

ACCOMMODATION PRE-REGISTRATION

ESC — AES Halifax Meeting, 26-29 August 1974
(Deadline 1 May 1974)

Return to: June Herbert, Research Station,
Agriculture Canada, Kentville, N. S. B4N 1J5

Name:

Address

Arrival Date a.m. ☐ p.m. ☐ evening ☐

Departure Date a.m. ☐ p.m. ☐ evening ☐

I Expect to Arrive By: plane ☐ train ☐ car ☐ bus ☐

Membership: Honorary ☐ Retired ☐ Active ☐ Student ☐

PLEASE TURN OVER

SUBMITTED PAPER REPLY FORM

(Deadline — 30 April 1974)

RETURN TO: C. R. MacLellan, Research Station, Agriculture
Canada, Kentville, N. S. B4N 1J5

PLEASE PRINT

Author's name:

Institution and address:

PLEASE TURN OVER

ACCOMODATION REGISTRATION (Cont'd)

I will be accompanied by: my wife
(First Name)

who will ☐ will not ☐ participate in ladies program;

Children: Ages:
(First Names)

Accommodation:

Reservations will be made at Dalhousie University by the Secretary of the AES.

Accommodation Required: Single with meals (\$10.50 + Tax) ☐
Double with meals (\$21.00 + Tax) ☐

Will Share With:

Hotel accommodation (none within walking distance) my responsibility ☐

Do you require special accommodation due to physical disability?

PLEASE TURN OVER

SUBMITTED PAPER REPLY FORM (Cont'd)

Title of paper:

To be read by:

Projection equipment required: 2 x 2 ☐, 16 mm ☐, none ☐

An abstract of less than 200 words must accompany this form.

Resumes for the press requested and accepted up to 1 July 1974.

PLEASE TURN OVER

FOURTH ANNUAL INSECT PHOTO SALON ENTOMOLOGICAL SOCIETY OF CANADA

26-29 August 1974

Members of the Entomological Society of Canada and biological photographers are invited to submit black and white prints, color prints and color slides of insects, related arthropods, insect damage, nests, tracks, etc. for exhibit at the Halifax, Nova Scotia, meeting.

Award certificates and ribbons will be presented to the winners in each category. The best overall entry will be awarded a best in salon certificate. There will be a public showing of all submitted photos and a slide show during the meetings. The names of the winners will be announced in a future issue of the *Bulletin of the Entomological Society of Canada*.

Insect Photo Salon Committee

- S. Zettler, Environment Canada, Winnipeg, Man.
- R. Cheale, Agriculture Canada, Winnipeg, Man.
- A. Lightfoot, Agriculture Canada, Kentville, N. S.
- R. Brust, Chairman, University of Manitoba, Winnipeg, Man.

Note: The success of the photo salon depends on you. Please notify your photo section and any other potential contributor. Facsimiles of the entry form are acceptable.

ENTRY FORM

FOURTH ANNUAL INSECT PHOTO SALON

Name

Street

City Province/State

Postal Code Member Ent. Soc. Canada

Fee enclosed \$ + return postage

INSECT PHOTO SALON

Conditions of Entry

1. Subject: Entomology in the broad sense.
2. The competition is open to amateur and professional photographers.
3. Four Categories: a) Black and White prints; b) Color Prints; c) Color Slides; d) Photomicrographs.
4. Prints must be 8" x 10" or larger, mounted on 11" x 14" cards.
5. Entries may not exceed 4 photos per person, including slides and prints.
6. All photos should be titled or the subject identified. Sender's name should be on the reverse side.
7. Judging will be completed before the meeting.
8. A completed entry form or a facsimile must accompany each entry.
9. Entry fee is \$1.50 per person.
10. Entries must be postmarked 26 July or earlier.
11. Entries will be returned only if accompanied by a self-addressed envelope and return postage. Foreign entries should be identified to clear Canadian customs. It should be stated on the parcel that the photographs are not for sale, but only for exhibition before a scientific society, the Entomological Society of Canada, and are to be returned to the sender. Make cheques or money orders payable to R. A. BRUST. Foreign entrants should send 50¢ to cover return postage.
12. Entries will receive every possible care but neither the Entomological Society of Canada nor the Insect Photo Salon Committee will be responsible for loss or damage.

Judges: Eric Holland, Photographer, University of Manitoba
John Giardino, Photographer, Manitoba
Agricultural Services
Andy Hamilton, Entomologist, Environment Canada

I M P O R T A N T

Have you enclosed — prints, return self-addressed envelope with postage, entry form and fee? All conditions must be complied with or entries will not be judged.

Address enquiries, entries, and make cheques and money orders payable to:

Dr. R. A. Brust
Department of Entomology
University of Manitoba
Winnipeg, Man. R3T 2N2

NATIONAL POPULATION POLICY

According to Dr. E. J. LeRoux, Assistant Director-General of the Agriculture Canada Research Branch, a national policy on planned growth, as all-inclusive as our Bill of Rights, must be developed without delay. This policy, which will give guidance to subordinate policies on energy use, technology, family planning, land use, etc., will have implications for the welfare of present and future generations of Canadians.

There is a consensus that Canada's problem is one of over- rather than under-population. Present population growth trends leave little doubt that, in the next two or three decades, Canada will experience a serious reduction in resources and in quality of life, with increased environmental problems, if we continue to encourage growth, human expectations and resource use.

Dr. LeRoux feels that, since continued growth is not a solution to the Canadian population problem, our national objective must be to reduce the rate of growth and size of Canada's human population and stabilize it at a level that can be sustained. Taking the "laissez-faire" approach to the problem would constitute a serious abrogation of our responsibility towards the needs and aspirations of the people who will be living in Canada 20 to 30 years from now. Since our population 20 years from now has already been determined by the present number of those under 25 years of age, every year that action is postponed lessens the options for effective population planning.

Planned population growth must be based on reliable knowledge of the parameters involved. These are many and complex, including distributional, biological, demographic and economic factors. The critical parameters will be our national and individual attitudes towards family size, family planning, regionalism and racialism.

Canada Agriculture, Fall 1973

INTERNATIONAL UNION FOR THE STUDY OF SOCIAL INSECTS

At the VIIth Congress of the International Union for the Study of Social Insects in London, September 1973, Messrs. S. E. Dixon of the University of Guelph and B. Hocking of the University of Alberta were named to represent Canada on an International Committee convened to consider the future of the organization and in particular the place of the next Congress, scheduled for 1977. Circumstances had prompted us to offer to investigate the possibility of the 1977 Congress being held in Canada and probably in the east, it being understood that we might have to enlist assistance from interested parties in the U.S.A. Other possible places are the Netherlands, Czechoslovakia, and France.

We would appreciate hearing in writing or orally from persons interested in this possibility, with the following minimum information: name, address, and affiliation; special interest if any (taxonomic group, discipline); probability of attending the Congress; willingness and ability to assist in organizing the Congress and in what capacity; names etc. of other interested persons who might not have seen this notice.

Interested persons who respond will thus form a Canadian chapter. The union has no fees but does, of course, have a journal, *Insectes Sociaux*. May we hear from you?

S. E. Dixon
B. Hocking

HENRY HURTIG 1918-1973



Dr. Henry Hurtig, 55, Research Coordinator (Environmental Quality), died on 13 December 1973 in the Civic Hospital, Ottawa, following a coronary attack.

Dr. Hurtig, who was born in Edmonton, began his research career with Agriculture Canada. While an undergraduate at the University of Alberta, he spent the summers of 1939 and 1940 at the Lethbridge Research Station. Upon graduation in 1941, he was recruited by Lethbridge as an entomologist, and he remained there until 1942 when he joined the Canadian Army. Most of his Army service was spent at the Suffield Experimental Station of the Defence Research Board.

In 1945, Dr. Hurtig entered the University of California, Berkeley, from which he was graduated with a Doctorate in 1948, his thesis concerning the physical and chemical characteristics, and toxicity of insecticidal aerosols. He returned to Suffield as Head of the Entomology Section, continuing his interest in spray dispersal.

Agriculture Canada called Dr. Hurtig back, in 1956, as Research Advisor, Division of Entomology. When the Research Branch was established in 1959, he became Associate Director of Program (Entomology and Plant Pathology). Latterly, he was Research Coordinator (Pesticides) and finally, Research Coordinator (Environmental Quality) as well as Chairman of the protection research group of Coordinators.

His contribution to the development of the Research Branch program was great, particularly in his anticipation of the so-called "pesticide problem". His convincing arguments led to the expansion of the Branch capability to meet this problem including the establishment of the Pesticide Technical Information Office. Concurrently, he made known the need for, and successfully developed the influential Canada Committee on Pesticide Use in Agriculture.

Extramurally, Dr. Hurtig was equally active. While in constant demand as an advisor to the Department, other departments and agencies, the provinces and the private sector, he found time to provide leadership and make a notable contribution to international activities, such as those relating to W.H.O., F.A.O., O.E.C.D. and U.P.A.C. For these, he was honored by Belgium, France and Israel.

Dr. Hurtig is survived by his wife, Dorene, his son, Mark, and two daughters, Cynthia and Julia, at home at 31 Mohawk Crescent, Ottawa. Two daughters, Annette and Joanne, are married and live in Saskatoon and Victoria, respectively.

Research Branch

ARTHUR R. BROOKS MEMORIAL

The Arthur R. Brooks Memorial Prize in Entomology was awarded to Mr. Douglas Smith at the Annual Meeting of the Entomological Society of Saskatchewan, Regina, 19-20 October 1973. The prize is awarded annually to a graduate student in entomology. Mr. Smith is presently working on the taxonomy of the Ephemeroptera towards the Masters Degree at the University of Saskatchewan, Saskatoon.

A REQUEST FOR GIFT SUBSCRIPTIONS AND DONORS

Almost four years have elapsed since the inauguration of the Society's Gift Subscription programme. The initial response to the programme was very good but of late, action has dwindled. This may mean that we are approaching fulfillment of the need for such gifts or that the attention of Society members has waned. With only sixteen gifts arranged we tend to the latter view.

The Gift Subscription programme was initiated by the 1969-70 Governing Board in recognition that many of our colleagues throughout the world who might benefit from having *The Canadian Entomologist* were prevented from doing so through financial or monetary exchange difficulties. Since many members of the Society had ready access to the journal through their institutional libraries, it was felt that they would be willing to donate their subscription to fulfill this need. A committee, therefore, was appointed to determine the need for gift subscriptions, to solicit the donation of subscriptions and back numbers from members and to co-ordinate the transfer. Subscription transfers are made at the mailing source of *The Canadian Entomologist*; those also donating series of back numbers ship directly, and are reimbursed by the Society for shipping charges. Four years ago the membership was canvassed for donors of subscriptions with excellent results. We still have three such gift subscriptions including back numbers awaiting placement. Our biggest problem has been to determine where the need for these gifts lies. In this we must depend to a large extent on you, the members of the Society. Among you are many with international contacts from which you may hear of possible gift recipients. Please pass these suggestions on to your Gift Subscription Committee. If, as we anticipate, there is a good response to the above request, the three subscriptions that we have on hand will need to be augmented. We, therefore, make a second request for the donation of further subscriptions of *The Canadian Entomologist* for use in this very worthwhile endeavour.

H. J. Teskey, Chairman
Gift Subscriptions Committee
K. W. Neatby Bldg.
Ottawa K1A 0C6

STRUCTURE, FUNCTIONING AND MANAGEMENT OF ECOSYSTEMS

The First International Congress of Ecology will be held in The Hague, The Netherlands, between 8 and 14 September 1974.

The main purpose of the Congress will be to bring together ecologists from all disciplines to discuss unifying concepts. Besides a number of special symposia will be held, partly organized by the International Biological Programme. The themes are:

- Flow of energy and matter between trophic levels.
- Comparative productivity in ecosystems.
- Diversity, stability and maturity in natural ecosystems.
- Diversity, stability and maturity in ecosystems influenced by human activities.
- Strategies for management of natural and man-made ecosystems.
- The significance of ecological principles for society.

Information: Secretariat First International Congress of Ecology, P. O. Box 9000, The Hague, The Netherlands.

HOUSE OF SCIENCE AND TECHNOLOGY

A seminar on the House of Science and Technology (HOST) organized by SCITEC was held in Ottawa, 9 November 1973.

The aims were: (1) to review the concept of HOST with the representatives of the scientific and technological societies, (2) to present to the society representatives the experiences of the Administrative Centre for Sport and Recreation — a similar concept which was now in full operation, (3) to obtain constructive suggestions from the societies to ensure that HOST will fulfill their needs and to seek active endorsement of and support for the concept.

Some 47 societies and 80 delegates responded to invitations to attend.

The programme included a review of the concept and recent activities related to a House of Science and Technology, a film presentation on the Administrative Centre for Sport and Recreation and an exposé of its development, and a presentation relating the experiences of ACFAS and the effect on its activities of government funds.

A large part of the meeting was devoted to discussion. The delegates then passed the following resolutions:

1. "The November 9, 1973 seminar on the House of Science, Engineering and Technology attended by a wide spectrum of delegates representing the scientific, engineering and technological organizations, wishes to express their strong support in principle for the concept of HOST and urges the Ministry of State for Science and Technology to provide the financial assistance necessary to launch such a project by April 1, 1974 with the goal of achieving full operational status no later than November 9, 1976."

2. "A committee representative of interested organizations is urged to proceed forthwith to prepare a plan sufficiently specific to formalize arrangements with MOSST, and should its financial support be insufficient, to seek funding from sources other than the government." The participants appeared to consider the first resolution to be the one of prime importance.

In addition, the delegates instructed the committee of Resolution 2 to "explore possible mechanisms whereby (a) the managerial responsibility of HOST would rest with a representative committee from resident and nonresident societies and (b) some time in the future the operation of HOST could become separate from SCITEC."

NEW BOOKS

A Research Study on Science Communication, by Orest Dubas and Lisa Martel, October 1973. Media Impact Report Vol. 1, Ministry of State, Science and Technology. Information Canada, Ottawa.

Frederick Valentine Melsheimer, Parent of American Entomology by Robert Snetsinger, 1973. The Entomological Society of Pennsylvania, University Park, Penn. viii + 86 pp. L.C. 73-91197. An 18-page biography of Melsheimer, whose story in America began at Quebec, followed by a reproduction of his 1806 *A Catalogue of Insects of Pennsylvania*.

BOOK REVIEW

Embryology and Phylogeny in Annelids and Arthropods. D. T. Anderson. International series of monographs in pure and applied biology, zoology division, Volume 50, 1973. Pergamon Press. Pergamon of Canada Ltd. 207 Queensquay West, Toronto 1. 495 pp. figs. 164. \$24.00.

This work comprises introduction, discussions on embryology of polychaetes, oligochaetes and leaches, onychophorans, myriapods, aptergote insects, crustaceans, chelicerates and a new synthesis on the phylogeny of these groups of annelids and arthropods.

Anderson faces great variations in the developmental processes that produce corresponding (homologous) areas in the adult. He believes, however, that each group should have an underlying unity in development and thinks that the blastula stage or its equivalent stage of embryonic development has a greater stability of functional configuration, and this configuration can be epitomized in a fate map. He analyses the embryonic development of major classes of annelids and arthropods from the viewpoint of phylogeny in terms of the formation and fates of the presumptive areas of blastula and blastoderm, and he has a chapter "the basic pattern of development" for each class. The phylogenetic inferences he draws through this procedure support those of Manton based on functional morphology.

This work deserves several comments. Firstly, there is no reference to the concept of genetic homeostasis, which presupposes a great array of variations in developmental processes in producing a homologous structure or standard phenotype. Yet, Anderson attempted to show a basic developmental pattern for each group. Such basic developmental processes, when recognized, are certainly valuable since they must truly reflect genetic similarity. However, the basic developmental patterns are apparently not true in certain cases. For instance, when he says (p. 251) that the 8th and 9th pairs of abdominal limbs contribute to the external genitalia (in insects), this is true only of a highly evolved group of Orthoptera. The number of abdominal segments that differentiate in pterygote insects varies in different insects, and the basic (?) number is not 11, but 12, which differentiate at different developmental stages in lower (as Anderson says) insects, etc.

Secondly, the validity of phylogenetic inference based on functional morphology, which Anderson accepts, should be at least discussed, since the concept of phylogeny has always been based on homology of structures (and vice versa); discussion of this basic procedure in the study of phylogeny is dismissed in this work. As is well known, homologous structures have been highly subject to change in function, and the word "homology" apparently has not been used in this work (judging from the index). Communication with de Beer's classical work "Embryo and Ancestor" is also lacking, in this as in other similar works.

R. Matsuda

HISTORY OF ENTOMOLOGY

A Centre for the History of Entomology was established in April 1973 at the Department of Entomology, the Pennsylvania State University, State College, Penn. The collection is available to students of the history of entomology, and solicits items of historic significance. Because entomology in Canada and the U.S.A. have always been closely associated, the Centre will also serve students of the history of entomology in Canada.

CHELEUTOPTERAN CHANTS

Walking Sticks

Stick-insect, Stick-insect, where have you been?
"I ain't bin no place, but you just ain't seen!"
Stick-insect, Stick-insect, where; tell me where?
How come that you've vanish'd right into thin air?
Stick-insect, Stick-insect, where are you now?
"Same place as before, you stupid old cow!"

Walking Leaves

My travelled Uncle William
Saw a leaf-insect, or *Phyllium*,
When reclining 'neath a bo-tree's shady limb.
At least that's what he said,
But I'm sure we've been misled,
For he really did not see it; it saw him!

• • • • •

epitaph on archy

cucaracha is famed for choreography;
archy for philosophic dactylography —
and for his oratory;
but cockroaches have little cause for merriment,
as they're used for scientific experiment —
in the laboratory;
and, though the blattoid tribe is very numerous,
home-loving kinds are seldom considered humorous —
by the majoratory.

N.B. Don 'Marquis' friend, archy, the cockroach, could only use lower case type,
so his epitaph is written likewise!

ODD ODES TO UNSUNG ORDERS

An Embiopteran Epitaph

We embiid web-spinners,
When seeking out our dinners,
Run back and forth in tunnels made of silk;
But, when we get the urge,
We occasion'ly emerge
From beneath a log, or places of that ilk.

We like our climates warm;
We're of dimorphic form;
We're soft and have a tendency to shrink.
"One does not often see 'em!"
Says the man in the museum,
But we're really not so rare as people think!

The Zany Zoraptera

Zoraptera are poorly known.
They form a small group on their own.
To other insects they're not near;
Relationships are far from clear.
We tend to call them soil ice,
But *Zorotypus*, once or twice,
Complained to me: "That's not quite nice!"

• • • • •

— and another one for the well known archie

culinary cockroaches
as soon as one approaches
will start
to depart
but only as far
as the cookie jar

D. K. McE. Kevan

BOOK REVIEWS

Biology of Coccinellidae by Ivo Hodek; publ. by W. Junk, the Hague and Academia, Prague, 1973; 260 pp., 58 photographs and 34 plates. Price 100 Dutch Guilders, \$38.50.

Occasionally a book is produced that places a scattered mass of knowledge in a logical and reasonable perspective. Such a book is this, a thoroughly enjoyable book filled with fact and analysis that could only have been written by a man who had been intimately involved with this group of insects for many years. With the assistance of four other authors who wrote the first three chapters, Dr. Hodek has produced a book whose subject matter ranges from taxonomy — briefly — and morphology to the value of coccinellids as predators.

Wisely the decision was made to omit a lengthy discussion of the detailed taxonomy of the family. In the first chapter, by I. Kovar, there is a short discussion of the taxonomy of tribal and subfamily groups and phylogeny. While one might quarrel with the details, one cannot deny that the argument is clear and concise. Most of this chapter is concerned with a discussion of the morphology of the family. Treatment of immature stages, by S. I. Savoiskaya and B. Klausnitzer, has too short an examination of larval morphology followed by a long detailed key to Palaearctic species. A shorter illustrated field key in chart form is also given. Although of limited value to workers outside the Palaearctic region, the keys do add to the general value of the book, especially in conjunction with the coloured plates of the larvae. A third chapter, by A. Hodek, concerns the variations and genetics of the family.

The other chapters, by Dr. Hodek, comprehensively explore such topics as distribution in terms of habitat, food relations, and dormancy. Each chapter brings together a well selected literature, some of it from journals not readily available. Reference material is carefully and clearly used.

One of the great strengths of the book lies in the bibliography which contains 517 entries. Although a few older papers, such as that by S. A. Forbes, 1883, are listed, most of the references are later than 1960. This bibliography with those in the Annual Review of Entomology of Hodek (1967, 221 titles) and Hagen (1962, 206 titles) must serve as a sound basis for the biological literature of the family. Among these lists there is not excessive overlap of entries; none treats the taxonomic literature extensively.

A series of paintings of larvae and adults and of photographs relating particularly to the chapter on diapause and hibernation, complete the book. The few typographical errors, some of which have been corrected on an errata sheet, do not detract from the overall value of the book. Unfortunately, however, the price might put this useful volume beyond the reach of many people.

W. Y. Watson

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Bioassay Techniques and Environmental Chemistry. A Symposium. G. E. Glass Ed., Ann Arbor Science Publishers Inc., Ann Arbor, Michigan, 1973, LC 72-96912, 496 pp., hard cover \$18.00

This work, organized and edited by Dr. Glass, contains 27 papers presented by biologists and chemists at a symposium that was held in conjunction with the National American Chemical Society Meeting in Washington, D.C., in 1971. It contains reports of research as well as reviews of principles and past work relating to environmental pollution.

Although this book is directed more to the aquatic biologist than to the entomologist, the basic principles of bioassay techniques, applied as a research tool in solving environmental pollution problems, are well documented.

The general topic of environmental complexities, introduced in the first section by Dr. F. M. D'Itri, is illustrated by a review of the impact of mercury in the aquatic ecosystem. The biological conversion of inorganic mercury to methyl mercury is the single most important factor contributing to the biological magnification of mercury in various trophic levels of aquatic organisms.

The principles of bioassay techniques are discussed in the second section. Although the methods outlined deal mainly with toxicity testing with fish, the discussion applies to tests with other organisms that could be used as indicators of pollution. The team approach whereby chemists, biologists, toxicologists, and statisticians work together at solving environmental pollution problems is emphasized.

The last three sections contain articles on the application of bioassay techniques and chemical analyses to the solution of pollution problems. It is shown that living organisms provide the only valid assessment of environmental quality, and that they must be studied as indicators of the stresses and effects from pollutants. Bioassay indicators that are discussed for measuring chemical stress include, among others, mammalian cells, plankton, crustacea, and fish. Unfortunately, the work does not include the standard techniques that use aquatic insects.

The articles are well written and edited. The 70 tables and 127 figures are well done and an exhaustive list of references (604) is provided. It is unfortunate that the index is limited and does not give an adequate cross-reference. The table of contents lists the articles by section and title, and provides the best reference for the reader to find his way through the text.

This work should serve as a useful reference text for biologists and chemists who are concerned with the aquatic environment. It should also provide excellent source material for student courses that deal with the environment.

Stuart McDonald

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Bionomics and embryology of the inland floodwater mosquito *Aedes vexans*.

W. R. Horsfall, H. W. Fowler, Jr., L. M. Moretti, and J. R. Larsen. University of Illinois Press, 1973. LC 72-97158. 211 pp., including 136 figs. Cloth bound. \$10.00 U.S.

This first extensive treatment of a North American mosquito will be welcomed by everyone involved in the study or control of floodwater mosquitoes. As the title suggests, it is a two-part book in which Horsfall and Fowler detail the bionomics, and Moretti and Larsen describe the embryology, of what is probably the most unpopular mosquito on this continent. Horsfall and Fowler present an almost bewildering array of observations on the bionomics of *Aedes vexans* under six headings: generations, egg, larva, pupa, adult, and colonization. Observations on and a discussion of embryonic development are presented by Moretti and Larsen in the form of a journal paper. Each part has its separate bibliography and both are united by a common index.

The bionomics part, in spite of its many literary inadequacies, is the more interesting part of the book. The numerous detailed observations presented by Horsfall and Fowler compensate for their rather unusual grasp of English usage. However, their undue emphasis on the egg (34 pages) and summary dis-

missal of the pupa (6 lines) does result in a slightly skewed presentation. Their account of the larva is exceptionally well written. Their inclusion of table of arboviruses associated with *A. vexans* will be appreciated by epidemiologists. Mosquito ecologists will undoubtedly find the bionomics portion thought-provoking.

Moretti and Larsen present a well written account and most interesting discussion of the embryology of *A. vexans*. It should serve as a model for future investigations of Nearctic mosquitoes. Their informative presentation will certainly benefit the comparative embryologist and phylogeneticist.

In spite of the numerous inconsistencies in grammar and style of presentation (e.g., species names on p. 26; percentages on p. 37; figures placed after bionomics summary but before embryonics summary; citations, compare Christophers in the two bibliographies) the text is relatively free of serious inaccuracies (e.g., *Aedes vexans nocturnus*, p. 6, was described by Theobald in 1903, not in 1913; *Aedes cinereus*, p. 26, was described by Meigen, not Coquillett; *Psorophora howardii*, p. 26, was described by Coquillett in that genus, delete parentheses; genres, p. 139, should be genera).

Although the literature reviewed for each part is extensive (bionomics, 269 references; embryology, 67 references), it is noticeably incomplete. Nevertheless, the bibliographic listings should spare the beginning student hours of searching. The bionomics bibliography alone is worth the price of the book. A pleasant surprise to this reviewer were the unabbreviated journal names.

If only because this book will be the standard work on *Aedes vexans* for several years, it deserves a place in the library of every mosquito worker.

R. A. Ellis

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Scabies. Kenneth Mellanby. Second edition, published by E. W. Classey Ltd., Hampton, Middlesex, England, 1972, vi + 81 pp., soft-bound. Distributed exclusively in North America by Entomological Reprint Specialists, P. O. Box 77971, Dockweiler Station, Los Angeles, California 90007, U. S. A. \$3.50.

The first edition of this book was published in 1943 as one of the Oxford War Manuals, a series which dealt with medical problems of importance during World War II. It is an excellent monograph on the itch mite and scabies, and has been continuously cited in many books as a standard reference on the subject. During the ensuing thirty years, the book went out of print and this, the second edition, takes its place. Except for the roman-numbered prefacing pages, the book is completely unchanged and is, therefore, essentially a reprint or a second printing. The foreword and the preface to the first edition were deleted from the second, which is unfortunate because the acknowledgments and background of the author's research for the book were included there.

The ten chapters of the book deal with the morphology and life history of the mite, the parasitology of scabies, the development of symptoms, secondary pathological conditions, the transmission, incidence, prevention, and treatment of scabies, conditions which may be confused with scabies, and other mites of medical and veterinary importance.

Dr. Mellanby explained the unchanged re-issue of his book partly on the fact that little important new material on scabies has become available. However, he admits to one new clinical problem in treating scabies with modern me-

dicaments, which is briefly mentioned only in the preface where it may be overlooked. Equally disappointing is that the few spelling errors ("*Sarcopies* for "*Sarcoptes*" on p. 4, "disgnosed" for "diagnosed" on p. 21, "*Notoedrus*" for "*Notoedres*" in chapter X) and some erroneous or outdated names and statements ("*Mesostigmata*" for "*Metastigmata*" on p. 69, "*Aleurobius*" for "*Acarus*" and "*Pediculoides*" for "*Pyemotes*", on pp. 72-73, and that the postlarval instars of many species of trombiculid mites are "entirely vegetarian", rather than predacious, on p. 71) were left uncorrected. Somewhat confusing, too, are the references to "the last war" throughout the book, which concern World War I, and those to "the present war" and to "recent work", which concern activities now thirty years old.

The publisher and printers of the second edition are changed from those of the first, but the quality of paper, clarity of type, and handiness of pocket-book size remain unchanged and excellent, as in the first. The quality of reproduction of the illustrations (both line drawings and halftones) is satisfactory, but not quite as good as in the original.

Because the original manual was such an excellent treatise of the itch mite and scabies, and because much of its content is still useful today, the re-issue of this book should be welcomed by medical practitioners, parasitologists, clinical subprofessionals, and interested lay people who have been unable to obtain a copy.

Evert E. Lindquist

Cerambycidae of North America. Part VI, No. 1, Taxonomy and classification of the Lepturinae, by E. Gorton Linsley and John A. Chemsak. University of California Publications in Entomology, Vol. 69. University of California Press, Berkeley and Los Angeles, California. Price \$5.50 U.S., paper cover, 149 pages.

This is the sixth part of a proposed nine-part monograph on the long-horned beetles of North America, North of Mexico. The previous parts have appeared in the University of California Publications in Entomology as follows: Part I, volume 18, 97 pp., 1961; II, volume 19, 102 pp., 1962; III, volume 20, 188 pp., 1962; IV, volume 21, 165 pp., 1963; V, volume 22, 197 pp., 1964. The present part will appear in two sections, the first includes the Desmocerini, Necydalini, and 22 genera of the Lepturini. The remainder of the Lepturini will appear later as number two of Part VI.

There is very little one can offer as constructive criticism concerning this first section Part VI. The present work maintains the high quality previously set in the earlier parts. For each genus there is included a list of pertinent references, a brief but certainly adequate description, the type species, biological notes and a key to each species. For each species there is given: a complete synonymy, description (male and female), type locality, range, flight records, host plants, flower visitation records (if known), and a brief account of the habits. The text is enhanced by the 24 excellent habitus drawings by Cleste Green. Seventeen distribution maps are also included. No important typographical errors were noted, in fact only two very insignificant errors of this type were found.

This work is certainly an essential part of the library of any forest and shade tree entomologist, general coleopterists or anyone interested in beetles of North America.

Donald E. Bright

Arthropods of Florida and neighboring land areas.

Volume 7. Agromyzidae of Florida, with a supplement on species from the Carribbean. By Kenneth A. Spencer and Carl E. Stegmaier, Jr. 205 pp., 491 maps and figures (1973).

Volume 8. The scarab beetles of Florida. Part 1. The Leparosticti (subfamilies Scarabaeinae, Aphodinae, Hybosorinae, Ochodaeinae, Geotrupinae, Acanthocerinae). By Robert Eugene Woodruff. 220 pp., 407 maps and figures (1973).

Available from the Florida Department of Agriculture and Consumer Services, Division of Plant industry, P. O. Box 1269, Gainesville, Florida 32601. Volume 8 costs \$3 and presumably volume 7 is about the same price.

Volume 7 is another contribution by these authors on the Agromyzidae. The first two-thirds of it deal with the 86 species of Agromyzidae from Florida with keys to the genera and species. The pertinent features of each species are illustrated. Also included for each species is a map of Florida showing the distribution, and an inset map showing the Nearctic distribution. The biology, where known, is given, as is a list of the known host plants of the Floridian species. The last third of this volume deals with the 77 Caribbean species with the same thoroughness as with the Floridian ones. Two new genera and numerous new species are described. This volume should stimulate interest especially in additional collecting of Agromyzidae; the maps indicate many gaps in distribution records.

Volume 8 is the result of nearly 15 years studying and collecting scarabaeids in Florida. The Florida fauna of the six subfamilies treated in this part comprise 248 species and subspecies. The stereoscan and habitat photographs are excellent, as are the habitus and genitalic drawings. The keys are very usable and each species is accompanied by a description; notes on biology; and a map of Florida indicating the detailed distribution, as well as an inset map showing the nearctic distribution. Detailed collection data are given in the appendices, thus not cluttering up the text. No new taxa are described. Hopefully we will not have to wait too long for the other half of this excellent study.

Edward C. Becker

Trichoptera (Kocherfliegen). Hans Malicky. Handbuch der Zoologie, 4(2) 2/29, 114 pp. 96 figs. Walter de Gruyter, Berlin. 1973. DM 130.00. (In German).

Small though the order Trichoptera may be, it is presently attracting even more interest than previously, and is served by what may seem to be a disproportionately large number of workers. But the literature had, till now, one longstanding gap — there was no comprehensive, up to date treatment of the biology of the order.

This publication, therefore, appears most opportunely, especially as it coincides with the completion of F. C. J. Fisher's *Trichopterorum Catalogus*, complete to 1960 in 15 volumes plus index. Malicky has done for the biology of the Trichoptera what Fisher has done for the systematics.

'Trichoptera' is a comprehensive digest of present knowledge of the biology of the order as a whole, on a world-wide basis. While exhaustive detail is understandably, and happily, avoided in a work of this length, previous major

works on specific, circumscribed, areas of Trichoptera biology have been consulted. These, with other less copious works, are listed in the references for those who wish to delve more deeply into matters of particular interest. As an introductory guide to the biology of the order, it quite properly pretends no innovation in the information presented.

Happily, Malicky has elected to take his excellent illustrations from the original papers to which he refers, and these are duly acknowledged. In some cases, however, this leads to curious results, as his text is in German. In the illustrations of morphoogy, such as those derived from papers in English, for example, the English abbreviations for the names of parts are retained, but in the legends they are equated to the German name or spelling, to which they do not correspond.

The text is divided by 12 main headings which may be taken as chapters, even though the sections which they head run on with little break in the text. These headings are: Historical Review, Diagnosis, Palaeontology and Evolution, Systematics, Biogeography, Ecology, Economics (to Man), Morphology, Physiology, Ethology, Reproduction and Development. Following the text is an index to names of species mentioned, followed by a list of references used. A table of contents is provided at the beginning. While, with the exception of Ecology, the earlier sections are relatively brief, fully two-thirds of the text is occupied by the sections from Morphology to Reproduction and Development. The larger sections, e.g. Morphology, are subdivided, and follow the general plan of treating first the larvae, followed by the pupae and adults.

There appears to be nothing to fault in the bulk of the text, but a few comments on the Systematics section are necessary. The main criticism, despite Malicky's comment on page 6, is the omission of a key. Each presently recognised family and sub-family is dealt with in turn, with adult diagnostic characters and geographic ranges given. I feel that a publication such as this would have been an ideal place in which to present a worldwide key to the adults of each family and subfamily, as presently known. The immature stages are still so incompletely known that keys to them can understandably be omitted. Two further, but minor, points should be mentioned. Firstly, while the fossil families are mentioned under Palaeontology and Evolution, they are not listed under Systematics, in consort with present-day families. Secondly, no authorities are given for family and species names in the text, but they are given for each name, in the index at the back – a novel and sensible device to avoid clutter and save space in the text.

Finally, a few comments on the physical make-up of the book. It is soft covered, of large format (12" x 8 3/4"), with two text columns per page. While I have a personal preference for a smaller format and one text column per page, the size of this book, which presumably conforms to the others of the 'Handbuch' series, precludes this. The book is well printed on good, soft paper, with clear type of ideal size for ease of reading. The illustrations have transferred excellently from the original papers. The text is clearly written and, with the aid of a good dictionary, should pose few problems of translation – an excellent chance to brush up on one's German.

Altogether this book, regardless of the minor criticisms aired above, is a most commendable addition to the literature on Trichoptera.

A. P. Nimmo,
University of Newcastle/Tyne,
England

FORTHCOMING MEETINGS

Fifth National (Iranian) Congress of Plant Medicine (Plant Protection), 7-12 September 1974, University of Tabriz, College of Agriculture, Tabriz, Iran. Contact: Abbas Davatchi, Professor of Plant Medicine, President of the Congress, University of Tabriz.

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

North Central Branch ESA, 3-5 April 1974, Hotel Ft. Des Moines, Des Moines, Iowa. Contact T. J. Helms, 1140 Idylwild Dr., Lincoln, Nebraska 68503.

Pacific Branch ESA, 18-20 June 1974, Nuggett Casino, Sparks, Nevada. Contact R. D. Carter, Box 36, San Leandro, California 94577.

Eastern Branch ESA, 26-28 September 1974, Hotel Hershey, Hershey, Pennsylvania. Contact H. T. Streu, Dept. of Entomology, Rutgers University, New Brunswick, New Jersey 08903.

IV International Congress of Acarology, 12-19 August 1974, Saalfelden, Austria. Write Dr. E. Piffel, Zool. Inst. University Wien, Wien 1, Dr. Karl Lueger-ring 1, Austria.

18th Annual Lifestock Insect Conference, 9-12 July 1974, Madison, Wisconsin.

Second Canadian Symposium on Remote Sensing, University of Guelph, Guelph, Ontario, 29 April - 1 May 1974. Joseph MacDowall, Program Chairman, Canada Centre for Remote Sensing, EMR, 2464 Sheffield Road, Ottawa K1A 0E4, Canada.

XIX Congress of the International Association of Limnology, University of Manitoba, Winnipeg, 22-29 August 1974. Major themes include Arctic and alpine limnology; the sediment-water interface; structure and dynamics of fresh water ecosystems; experimental manipulation of aquatic ecosystems; environmental research in socio-economic planning. Dr. J. R. Vallentyne, Freshwater Institute, 501 University Crescent, Winnipeg, Manitoba.

Seventh International Conference on Water Pollution Research, Paris, France, 9-13 September 1974. Dr. S. H. Jenkins, c/o Upper Tame Main Drainage Authority, 156/170, Newhall Street, Birmingham B3 1SE, England.

TO MEMBERS AND FRIENDS OF THE ENTOMOLOGICAL SOCIETY OF ONTARIO

Plan to help us celebrate the Centennial year of the Ontario Agricultural College. The University of Guelph will host the 111th annual meeting of the Entomological Society of Ontario on November 6, 7 and 8, 1974. As you review your past year's research efforts and plan for the future please keep in mind that your fellow members would like to hear about your work. Please plan to attend the meetings in November and share your discoveries with us.

Programme Committee, E.S.O.

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.

Recent Ph.D. graduate desires position in research or teaching. Special interests in ecology and behaviour, especially of pest organisms. Has worked with mosquitoes and with spiders. Ref. No. 46-6-73.

Ph.D. with 6 years University lecturing in Wales and 4 years University lecturing in Thailand, desires position in teaching, research or both. Specialist interest: forest insect ecology, most research publications on bark beetles. Ref. No. 36-7-73.

Ph.D. in insect physiology desires position in research or teaching. Major interests in effects of irradiation, chemosterilants, hormones and artificial diets. Good publication record. Ref. No. 31-5-73.

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*.

ACRIDA

The journal *Acrida*, the official organ of the international Association d'Acridologie, is anxious to become more international than it already is. It therefore solicits research and review papers on any aspect of the study of locusts and short-horned grasshoppers from all parts of the world. It also asks all those interested to assist in encouraging the increase of its circulation by soliciting subscriptions from libraries and individuals. A larger circulation than at present would materially assist the Association in its objectives. Particulars regarding subscriptions, etc., may be obtained from l'Association d'Acridologie, 105 Boulevard Raspail, 75 Paris 6^e, France.

The journal is of high quality and properly reviewed, it is abstracted, for example, in *Entomology Abstracts*, *Review of Applied Entomology*, *Biological Abstracts* (*Abstracts of Entomology*), *Current Contents*, *Bulletin Signalétique*, *CNRS*, France, etc. As of the first number for 1974 it will be publishing *Acridological Abstracts*, until now produced by the Anti-Locust Research Centre, London, and its successor, the Centre for Overseas Pest Research, which is discontinuing this valuable series.

D. K. McE. Kevan, Member of Council,
Association d'Acridologie

PERSONALIA

Professor A. W. Baker was named *Alumnus of Honour* of the University of Guelph, at the 1973 Annual Meeting of the Alumni Association. He was cited for his many contributions to entomology, his community, and the University, and described as "a man of many arts — academic, entomologist, conservationist, athlete, and tireless organizer". Prof. became an Honorary Member of the ESC in 1963.

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Philip S. Corbet, Professor and Chairman, Department of Biology, University of Waterloo, has accepted appointment as Professor and Director of Studies in Environmental Sciences at the University of Canterbury and Lincoln College, Christchurch, New Zealand. He will take up his new position towards the middle of 1974.

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Dr. Alan Campbell has been offered a post-doctorate fellowship by the University of Manitoba (NRC) to work in the laboratory of Dr. R. N. Sinha (Hon. Professor, University of Manitoba) Agriculture Canada, Research Station, Winnipeg. Alan received his Ph.D. degree in biology at Simon Fraser University, Burnaby, B.C., and is currently working on bioenergetics and simulation ecology of some stored-grain pests in Winnipeg.

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R. A. Ellis has accepted the position of City Entomologist with the Parks and Recreation Division of the City of Winnipeg. An adopted westerner, Roy has a B.Sc. and M.Sc. from Simon Fraser University and a Ph.D. from the University of Manitoba. As a postdoctorate fellow associated with Carleton University and the Biosystematics Research Institute, Roy has been working on a handbook of the Mosquitoes of Canada due to be completed in December, 1974.

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Jan Klimaszewski, a graduate student from Poland, is visiting the Biosystematics Research Institute, Ottawa, to study classification of the Coleoptera. He has his Masters degree in biology from Wroclaw University. He came to Canada as a private visitor to study and to improve his English, and plans to stay about eight months.

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Thierry Vrain s'est joint, comme nématologiste, au personnel de la Station de Recherches de St-Jean d'Agriculture Canada. Il est né en France et obtint sa maîtrise et son D.E.A. (Bachelier) à l'Université de Caen. Présentement en congé d'études, il poursuit de travaux pour le Ph.D. à l'Université de la Caroline du Nord.

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Neil Westcott has joined the Agriculture Canada Research Station, Saskatoon as a pesticide chemist. He has his Ph.D. from U.B.C. and was most recently a postdoctoral fellow at the University Chemical Laboratory, Cambridge, England.

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Mukul Mukerji has recently transferred from the Entomology Section, Ottawa Research Station to the Agriculture Canada Research Station at Saskatoon. He will study the population dynamics of grasshoppers.

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Paul Albert has recently been appointed Assistant Professor in the Department of Biology, Loyola College of Montreal. Paul is an insect neurophysiologist who has worked with W. B. Seabrook, University of New Brunswick, and R. Y. Zacharuk, University of Saskatchewan at Regina.

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STUDENT, REGULAR and SUSTAINING MEMBERS receive the Bulletin and the journal (CANADIAN ENTOMOLOGIST), but the Memoirs are optional; please indicate whether you wish to receive the Memoirs.

..... YES

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INFORMATION ON MEMBERSHIP IN THE ENTOMOLOGICAL SOCIETY OF CANADA

The Society's objects: to study, advance, and promote Entomology

To apply for membership in The Entomological Society of Canada (ESC), complete the Application Form on the reverse of this sheet and send, together with the appropriate annual fees, to the Treasurer of ESC at the address given on the Form.

Types of Membership available:

REGULAR MEMBERSHIP — The annual fee is \$18.00, or \$16.00 through concurrent membership in an affiliated regional society. The seven affiliated regional societies are listed below with their annual membership fees shown. When applying through concurrent membership in a regional society, add the correct regional society fee to the \$16.00 ESC fee, make the total payable to "The Entomological Society of Canada" and send to the Treasurer of ESC at the address given on the Application Form (exceptions noted below).

Acadian Entomological Society	annual fee \$2.00
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* Annual fee for membership in the Ontario or in the Alberta regional society should be sent directly to the Treasurer of the regional society.

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1974

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