

DR. R. A. BRUSH

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Philip S. Barker  
Editor  
Winnipeg, Manitoba

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## ENTOMOLOGICAL SOCIETY OF MANITOBA

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An official publication of the Entomological Society of Manitoba, printed by the Society and distributed, free of charge to members in good standing.

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## ON EDITORS OF SCIENCE JOURNALS

I have been editing the Proceedings of the Entomological Society of Manitoba for the past 12 years, starting with volume 26 (1970). I have also edited The Manitoba Entomologist for some years. The time has come, therefore, to give young people an opportunity to learn the art of editing the Proceedings. It is appropriate, then, that I should say something about the editorial process in scientific and semi-scientific periodicals.

The major factor in a periodical of this sort is that it is nurtured in an environment where most activity is voluntary and unpaid. Contributions to the periodical are voluntary; referee work, if any, is voluntary; the editorial work itself, is often voluntary. This means, quite simply, that nobody can be pushed into doing things which they do not feel like doing at a particular moment; patience becomes a greater virtue, and a committee's interference a deadlier poison than ever before.

Along with the voluntary aspect of editorial work comes a spirit of magnanimity; a periodical will eventually wither and die where magnanimity is lacking; editors, referees, and contributors give freely of their time and expert knowledge. The mere existence of the periodical proclaims the names of those people who have been generous to the periodical; were it not for their generosity, costs would rise to prohibit publication.

In this context of magnanimity and generosity, it is of paramount importance that editors and referees should give contributors every possible "benefit of the doubt"; a disgruntled referee is of no use to anyone, including himself: far too many referees have merely let it be known to the editor and to others through "corrections" to a manuscript, that their ignorance of subject matter and of human relations is abysmally bad.

A little has been published about editorial work in scientific journals during the past few years. The relevant skills, however, can only be obtained by personal experience; moreover, much of what has been written only applies to certain journals. A young editor discovers, soon enough, the advantages of check-lists, the formation of the right habits of mind, and the right ways in which to deal with people, etc. Some of these things may be known to the young editor,

but other things must be learned; with good will, all things are possible.

An editor must have some of the characteristics of a practical business man; to be an administrator, or a committee man is not enough; a scientist's mode of thought is not the right kind either. What an editor needs is a very practical outlook, generosity, and tact in his relations to other people.

Over the years I have been deeply impressed by the willingness with which people offer their time and expert knowledge to serve as contributors, referees, and editors, of their scientific and professional journals. They deserve our respect and admiration.

Philip S. Barker, Editor,  
Proc. Entomol. Soc. Manitoba.

ABSTRACTS OF PAPERS PRESENTED TO THE THIRTY-SEVENTH ANNUAL  
MEETING OF THE ENTOMOLOGICAL SOCIETY OF MANITOBA

NOVEMBER 4 - 6, 1981

SEMINAR ROOM, FRESHWATER INSTITUTE, 501 UNIVERSITY CRESCENT  
WINNIPEG

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THE EFFECTS OF DIFFERENT CULTURAL PRACTICES ON THE OCCURRENCE  
OF GROUND BEETLES (COLEOPTERA: CARABIDAE) IN AGRICULTURAL  
LAND

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ABSTRACT: The occurrence of carabid beetles was studied using pitfall traps in field plots from 14 June to 29 October, 1979. Nine 100 m<sup>2</sup> plots were arranged in a Latin square design, and on 28 June were either tilled, treated with herbicide, or left fallow. Of the most commonly caught species, Amara avida, Anisodactylus sanctaecrusis, and Pterostichus corvus, occurred most frequently in the fallowed plots throughout the season. Harpalus amputatus was caught more frequently in the fallowed plots for one month immediately following the treatments, but appeared more often in the herbicide treated plots thereafter. Similarly, Amara apricaria was more frequently captured in the fallowed plots until 20 September, after which it was more common in the tilled plots.

THE BIOLOGY AND CONTROL OF THE SLUG DEROCERAS LAEVE IN  
MANITOBA STRAWBERRY FIELDS

BRIAN D. PRYSTUPA

Department of Entomology, University of Manitoba, Winnipeg  
R3T 2N2, Manitoba

ABSTRACT: The slug Deroceas laeve causes economic damage in Manitoba strawberry fields. Chemical control was tested on field plots in 1980 and 1981 using recommended, potential, and unregistered molluscides. Methiocarb bait, a Metaldehyde spray formulation, and a reformulated Metaldehyde bait were the most effective of those molluscides tested. Straw mulch management and hedgerow care and composition were cultural practices that were associated with reduced slug numbers. Chemical and cultural control methods may reduce slug numbers below damaging levels when synchronized with the phenology of the slug D. laeve.

BITING FLY PROBLEMS IN MANITOBA

M. M. CHANCE

Canada Biting Fly Centre, University of Manitoba, Winnipeg,  
Manitoba

ABSTRACT: Biting flies in Manitoba are a threat to human health, cause losses in productivity of livestock, and, in some areas, are a severe nuisance. The nature of these problems and the effort devoted to solving them was reviewed.

The most serious problem is the role of mosquitoes in outbreaks of western equine encephalitis. Monitoring of mosquito populations and arborviral activity identified in mosquitoes, sentinel flocks, and horses, is carried out annually to predict outbreaks of this disease. Conditions leading up to the 1981 outbreak of western equine encephalitis, and criteria used to assess risk to human health were discussed.

NOTES ON THE PREDATORS AND PARASITES OF APHIDS IN MANITOBA

B. A. BATULLA AND A. G. ROBINSON

Department of Entomology, University of Manitoba, Winnipeg

R3T 2N2, Manitoba

ABSTRACT: In 1980, 185 samples of predators and parasites of aphids were collected in various areas of south and central Manitoba. Sixty different species of aphids were collected. Of these, 57 species were found to be parasitized and, or, preyed upon.

The collections included the following predators:  
1 species of Anthocoridae (Hemiptera); 1 Nabidae (Hemiptera);  
2 Hemerobiidae (Neuroptera); 2 Chrysopidae (Neuroptera);  
10 Coccinellidae (Coleoptera); 1 Lycaenidae (Lepidoptera);  
1 Cecidomyiidae (Diptera); 11 Syrphidae (Diptera); and  
6 Chaemamyiidae (Diptera).

The Aphid-parasitizing Hymenoptera were: 4 Aphelinidae;  
1 Encyrtidae; 1 Cynipidae; 3 Pteromalidae; 29 Braconidae;  
1 Ichneumonidae; and 1 species of Ceraphronidae. Parasites  
were also obtained from the aphid predators: Chrysopidae  
were parasitized by 1 species of Encyrtidae; Syrphids were  
parasitized by 1 Encyrtidae, 1 Figitidae, 1 Ceraphronidae, and  
3 Ichneumonidae species. Chaemamyiidae were parasitized by  
1 Encyrtidae, and 1 Ceraphronidae species. There was a higher  
occurrence of parasitization in the Chaemamyiidae than in the  
other Diptera.

ASSESSING THE SUSCEPTIBILITY OF BRASSICA LINES TO FLEA BEETLE

DAMAGE

R. J. LAMB

Research Station, Agriculture Canada, 195 Dafoe Road, Winnipeg,

R3T 2M9, Manitoba

ABSTRACT: Brassica resistance to flea beetle (Phyllotreta spp.)

damage is a potential control strategy for these pests of rapeseed. To identify resistant Brassica lines a screening method was required. A sequential seeding method, a system of controls, and measures for damage were devised to permit screening of Brassica lines in the field where massive and unpredictable invasions of flea beetles can occur. There was much variability in susceptibility to damage among and between Brassica species. One variety of rapeseed was identified which was substantially less susceptible to damage than the current recommended varieties. Host plant resistance is a promising alternative method of controlling flea beetles on rapeseed.

EFFECTS OF TEMPORAL POST-EMERGENCE PROTECTION OF RAPESEED  
FROM FLEA BEETLE ATTACK ON YIELD

G. K. BRACKEN AND G. E. BUCHER

Research Station, Agriculture Canada, 195 Dafoe Road, Winnipeg  
R3T 2M9, Manitoba

ABSTRACT: Protection of rape plants from flea beetle attack by cageing for varying periods from germination and conversely, protection after similar periods of exposure to attack, showed that rape seedlings were most susceptible to damage at 5 to 10 days of age. Loss of yield can be attributed to reduction of plant numbers to below 48/m<sup>2</sup>; there was a poor correlation between plant density and yield for densities exceeding this value. Destruction of early seedlings coupled with some reduction in growth rate of survivors prolongs time for crop maturity. The ideal insecticide would provide protection from flea beetles for 15 to 20 days and maximum protection from the 5th to 10th day following germination.

ELM BARK BEETLE RESEARCH AND CONTROL IN WINNIPEG

J. L. BUTH AND R. A. ELLIS

City of Winnipeg, Parks and Recreation Department,  
2799 Roblin Boulevard, Winnipeg, Manitoba

ABSTRACT: Dutch elm disease was first reported in Winnipeg in 1975. The fungus, Ceratocystis ulmi (Buism.) C. Moreau is spread by two elm bark beetles in North America, i.e., the smaller European elm bark beetle, Scolytus multistriatus (Marsh.) and the native elm bark beetle, Hylurgopinus rufipes (Eichh.). The primary vector of the disease in Canada is H. rufipes. Overwintering H. rufipes adults can be controlled by treating the lower 1 m of elm trunks with an insecticide. The City of Winnipeg's Insect Control Branch conducted elm trunk spray programs in 1976, 1977, 1979, 1980, and 1981 using methoxychlor and chlorpyrifos. Both insecticides were found to be effective in reducing numbers of overwintering H. rufipes.

Elm bark beetle trapping has been conducted since 1977 using sticky bands, window flight traps or sticky cards baited with Multilure for attracting S. multistriatus. Sticky bands and sticky cards are both effective traps for H. rufipes. S. multistriatus, a new record for Manitoba, has been collected in 1979, 1980, and 1981.

PEST PROBLEMS AND PEST MANAGEMENT IN STORED GRAIN IN CANADA

N. D. G. WHITE

Research Station, Agriculture Canada, 195 Dafoe Road, Winnipeg  
R3T 2M9, Manitoba

ABSTRACT: Insect damage to food grains in storage amounts to about 13 million tonnes per annum worldwide, while losses in Canada are probably less than 1% of production.

More than 600 species of insects have been found in stored products throughout the world with 80 species of insects and 50 species of mites found in Canadian products. Only



a few of these species are major pests.

The extent and types of arthropod infestations in Canadian grain from the farm, the primary elevator, the terminal elevator, and feed or flour mill were reported. Economic losses associated with rodent and bird pests of stored grain were estimated.

Knowledge of the interrelationships within stored-grain ecosystems allows us to protect the stored food under various conditions with minimal loss in quality and quantity by integrating physical, chemical and biological methods.

#### LOW TEMPERATURE FEEDING BY COLLEMBOLANS

C. W. AITCHISON

Department of Entomology, University of Manitoba, Winnipeg

R3T 2N2, Manitoba

**ABSTRACT:** Eight species of litter collembolans fed in culture tubes of the fungus, Cladosporium cladosporoides at 2, -2, and -5°C; some of the fungi was C-labelled. The collembolans were then given a choice between four fungal foods and a control of finely ground litter in a Petri dish arena containing a plaster of paris/charcoal base. Feeding was determined by counts of fecal pellets, by resultant radioactivity counts (dpm) and by the number of times found at a fungal species.

All eight species of collembola fed at 2°C, and -2°C, but at -5°C feeding was observed for only some individuals of the winter active species, i.e., Tomoscerus flavescens, Orchesella ainslei, Lepidocyrtus cyaneus, Isotomurus palustris and Isotoma viridis. The results from feeding on labelled fungi indicated that more feeding may occur per individual at -2° than at 2°C. At 10°C the same collembolan species were initially tested on eight fungal species, extracted from litter at the field site; four fungal species were preferred. In conclusion, those species of Collembola which are winter-active feed at subzero temperatures, probably selectively consuming about four species of litter fungi.

## A SURVEY OF INSECT PESTS IN MANITOBA

D. L. SMITH

Manitoba Department of Agriculture

ABSTRACT: During an average growing season, farmers can expect to face any one of about 8 insect pests which commonly attack cereal and special crops in Manitoba. The pests are grasshoppers, cutworms, armyworms, aphids, sunflower beetles, flea beetles, diamondback moths and bertha armyworms. Of these, only sunflower beetles and flea beetles are annual problems.

Vegetable growers face a wider variety of insect problems which require control measures on a regular basis each year.

A number of insects affect livestock production in Manitoba. Pasture flies, a complex of insects including horn flies, stable flies, mosquitoes, black flies, horse flies and face flies can disrupt beef and dairy production during the summer months. Warble flies may inhibit beef and milk production through the gadding of cattle caused by adult flies during July and August, while further losses can occur in beef cattle through the trimming of warble grubs from infested carcasses at the time of slaughter. During the winter months cattle are also susceptible to infestations of cattle lice.

Economic threshold levels of infestation are now available for most of the important crop and livestock pests, and extension personnel strongly encourage farmers to follow these guidelines. Although more and more farmers are assessing insect populations before undertaking control measures the majority of control operations are probably still carried out without adequate estimates of insect populations being made by the farmer.

DEVELOPMENTAL AND MORTALITY RATES OF THE YELLOW-BIRCH LACE  
BUG (HEMIPTERA: TINGIDAE) ON WHITE-BIRCH TREES IN ALGONQUIN  
PARK

M. A. HENDERSON

Department of Entomology, University of Manitoba, Winnipeg  
R3T 2N2, Manitoba

ABSTRACT: The purpose of the study was to investigate reproductive, developmental and mortality rates in an insect population with a heterogeneous age structure. The lace bug, Corythuca pallipes Parshley, was chosen because it is sedentary, conspicuous, and easy to handle, and all the life stages occur on the host-tree leaves. Its life history was also investigated because it is poorly known.

Population sizes of the adults, eggs and the five nymphal instars were monitored throughout the summer by sampling or population census on three small trees. The influence of temperature and density (number of bugs per leaf) on developmental and mortality rates were investigated by establishing experimental cohorts of 1-day-old nymphs on saplings in the field and on excised leaves in the laboratory.

Oviposition began soon after overwintered adults emerged from leaf duff in May and continued until early August at a rate of about 3 eggs per female per day. Development from egg to adult required 6-8 weeks. Populations increased about 60- to 70-fold from spring to summer. Egg and nymphal mortality was low (about 60-75%) compared to winter mortality of adults (90-95%). Daily mortality was found to be higher during the earlier than the later nymphal instars. Temperature had a significant influence on both developmental and mortality rates. Density had no significant effect on either of these parameters.

COMPARISON OF TWO PELLETIZED FORMULATIONS OF ALUMINIUM  
PHOSPHIDE FOR THE CONTROL OF ADULTS AND EGGS OF  
CRYPTOLESTES FERRUGINEUS (STEPHENS)

PHILIP S. BARKER

Research Station, Agriculture Canada, 195 Dafoe Road, Winnipeg,  
R3T 2M9, Manitoba

ABSTRACT: The objective of the test was to compare two competing commercial formulations of aluminium phosphide pellets, with regard to their effectiveness for the control of Cryptolestes ferrugineus (Stephens). The pellets were applied to 12-bu bulks of wheat in which caged beetles and their eggs had been placed prior to treatment. Gas concentrations were measured each day.

Gastoxin, the Brazilian formulation, evolved hydrogen phosphide a little more rapidly than did Phostoxin, the German formulation. Both formulations produced fumigant concentrations that were comparable and in excess of 0.11 mg PH<sub>3</sub>/liter for the 3 full days required to cause 100% kill of the highly resistant eggs.

Both formulations were equally effective for control of the beetle's eggs, although there was a difference in the pattern of generation of hydrogen phosphide.

VARIATION IN HOST PLANT PREFERENCE OF THE PEA APHID  
ACYRTHOSIPHON PISUM (HARRIS) (HOMOPTERA: APHIDIDAE)

S. M. C. SUBASINGHE AND P. A. MACKAY

Department of Entomology, University of Manitoba, Winnipeg  
R3T 2N2, Manitoba

ABSTRACT: Variation in host plant preferences of A. pisum and the relationship between previous host-plant and response to a new host plant were examined. Field transfers were made among

plots of alfalfa, sainfoin, trefoil, sweet clover, faba bean and field peas. Parameters measured were percent survivorship, fecundity, proportion of alatae in progeny and adult dry weight. Among the aphids in any single field, tremendous variation in response was observed when these aphids were exposed to different host plants. This indicates that such a local population consists of many different biotypes. Populations on certain perennials (e.g. sweet clover) were incapable of developing significant infestations on certain annuals (e.g. field peas). Seasonal changes in host plant preferences in populations on a crop were also observed.

It is suggested that biotypes in the pea aphid result from annual genetic recombination of the fall sexual generation and subsequent selection among, and redistribution of, a set of asexual clones in the following spring and summer. Therefore each year a different set of aphid biotypes with different host plant preferences may be present. For this reason, in assaying plants for resistance to pea aphids, only fundatrices and their immediate offsprings which have not been subjected to this selection should be used as test organisms. Moreover, tests on plant varieties should be carried out over several seasons to ensure exposure of the varieties to all possible biotypes.

THE RELATIVE EFFECTIVENESS OF INSECTICIDE STRATEGIES RECOMMENDED  
TO CONTROL FLEA BEETLES IN RAPESEED

D. M. BOYLE, D. FRESHWATER

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Winnipeg, Manitoba

AND R. J. LAMB

Research Station, Agriculture Canada, 195 Dafoe Road, Winnipeg  
R3T 2M9, Manitoba

**ABSTRACT:** Flea beetles are the major insect pest affecting rapeseed. Spring infestations, if undetected, may cause damage severe enough that the rape plants cannot fully recover, and yields are reduced. Several insecticides are recommended to

control early season flea beetle infestations. Potential for large monetary benefits relative to small costs of chemical application seem to exist when an insecticide is applied. The objective of this study was to calculate and compare these benefits.

Dosage response functions were estimated from the available experimental test plot data. Percentage increases in yield were estimated for seven flea beetle control strategies and five levels of pest infestation. Price of rapeseed estimates as well as probabilities of damage were incorporated into the analysis.

With the probabilities of damage and the rapeseed prices used, the analyses indicated that Furadan granular insecticide performed better than all other alternatives in terms of revenues net of chemical costs.

POPULATION DYNAMICS OF CULEX RESTUANS THEO. AND CULEX TARSALIS  
COQ. IN THE WINNIPEG AREA

W. J. GALLAWAY AND R. A. BRUST

Department of Entomology, University of Manitoba, Winnipeg,  
R3T 2N2, Manitoba

ABSTRACT: Oviposition pools (1 m<sup>2</sup>) and CO<sub>2</sub> baited CDC light traps were used to monitor Culex restuans and Culex tarsalis populations in Winnipeg and at the Glenlea Research Station, during the summers of 1980 and 1981. During both years Cx. restuans commenced egg laying in mid-May and continued until mid-September, with a major peak of activity occurring in early to mid-July. Three to 4 generations per year occurred in Cx. restuans. Observations over a 24 hr period revealed that in Cx. restuans a peak in oviposition activity occurred 2 hrs. after sunset.

In 1980, at the Glenlea Research Station, Cx. tarsalis commenced oviposition in late May and continued until late August. Two major peaks in oviposition activity were discerned over the summer. The first one occurred in late June, and the second during mid-July and was accompanied by a peak in the adult population. There appeared to be 2 generations in 1980.

The number of generations in 1981 could not be determined, as the number of egg rafts was too low. Over a 24 hr period, a light trap catches of adult female Cx. tarsalis were found to be highest at 2 hrs after sunset, and decreased to 0 at sunrise.

The 1 m<sup>2</sup> artificial pools was found to be a suitable technique for the monitoring of Cx. restuans populations, but not for Cx. tarsalis populations.

#### AN APPROACH TO THE MANAGEMENT OF INSECT PESTS OF CANADA

W. J. TURNOCK

Research Station, Agriculture Canada, 195 Dafoe Road, Winnipeg

R3T 2M9, Manitoba

ABSTRACT: The potential for improvement in different approaches to the protection of the rapeseed crop (insecticides, monitoring, and prediction of infestations) and to the reduction of population levels of pests (biological control, plant resistance, cultural control, trapping) was examined in relation to the life systems of flea beetles (Phyllotreta spp.), bertha armyworm (Mamestra configurata), diamond back moth (Plutella xylostella), and the red turnip beetle (Entomosceles americana). The availability of the means to develop the identified potential was also evaluated. On these bases, a farm management calendar incorporating existing and potential techniques to protect rapeseed crops and to reduce pest populations was presented. The method described, of evaluating approaches within a pest management system, could be applied to other insect pest crop situations as an aid to research planning and the implementation of new techniques.



MINUTES OF THE 37 ANNUAL MEETING  
ENTOMOLOGICAL SOCIETY OF MANITOBA

14:00 h., 6 November, 1981

Seminar Room

Freshwater Institute, 501 University Crescent, Winnipeg,  
R3T 2N6, Manitoba

The President, D. A. G. Robinson, presided. A quorum being present, the President called the meeting to order and asked the Secretary, Dr. R. J. Lamb, to take minutes of the meeting.

Present

Executive: Dr. A. G. Robinson, President; Dr. W. B. Preston, Past President; Dr. T. D. Galloway, Regional Director; Dr. R. J. Lamb, Secretary.

Executive staff: W. L. Askew, Treasurer; Dr. T. D. Galloway, Editor of the Newsletter; Dr. G. H. Gerber, Editor of The Manitoba Entomologist.

Members:

Buth, J. L.	Wylie, G.
MacKay, P. A.	Loschiavo, S.
Henderson, M. A.	McGinnis, K.
Turnock, W.	Burton, D. K.
Friesen, M.	Arntfield, P.
Webster, B.	Flannagan, J. F.
O'Neil, C.	Smith, D. L.
Ayre, G. L.	Conroy, J. C.
White, N. D. G.	Watters, F. L.
Madrid, F.	Battulla, B. A.
Brust, R. A.	Jay, C.
Bracken, G. K.	

1. Agenda (Appx. A)

Motion - Conroy/Gerber: Adoption of the Agenda.

Carried

2. Minutes of the last Annual Meeting

Motion - Loschiavo/MacKay: Adoption of the minutes of the 36th Annual Meeting of the Entomological Society of Manitoba Incorporated, held on 14 November, 1980, and published in the Proceedings of the Entomological Society of Manitoba (Vol. 36, 1980).

Carried

3(a). Business arising from the minutes

Motion - Smith/MacKay: That the membership list be published in the Proceedings.

Carried

3(b). Auditor's Report (Appx. B)

The auditor's report on the fiscal year ending on the 31 August, 1981, was distributed at the meeting.

Motion - Askew/Conroy: Acceptance of the auditor's report.

Carried

EXECUTIVE REPORTS

4(a). President (Appx. C)

Motion - Robinson/Conroy: Acceptance of the President's report as read.

Carried

4(b). Treasurer (Appx. D)

Question: Gerber asked whether we should consider a fee increase because of the net loss.

Answer: No fee increase is required because the loss will be made up by receipts delayed by the mail strike.

Question: O'Neil asked which budget items caused the net loss.

Answer: The net loss is measured as disbursements minus receipts.

Question: Brust asked if the loss is due to The Manitoba Entomologist.

Answer: No, The Manitoba Entomologist produces a net profit.

Motion - Askew/Conroy: Acceptance of the Treasurer's report.

Carried

4(c). Appointment of Auditor

Motion - Askew/Loschiavo: That Miss Helen Samboluk be appointed to audit the Society's accounts and financial records.

Carried

4(d). Editor - THE MANITOBA ENTOMOLOGIST (Appx. E)

Motion - Gerber/Ayre: That the Society discontinue publication of The Manitoba Entomologist.

Discussion: Robinson noted that the journal is behind in its goal of publishing annually, and that insufficient manuscripts have been received to allow the journal to publish, let alone catch up. He requested opinions from the membership on the matter. In the general discussion that followed it was indicated that two factors are discouraging authors from submitting manuscripts: 1) the long delay between acceptance and publication, and 2) the low weight given to regional publications by granting agencies and managers of government research. The first problem cannot be solved unless more manuscripts are submitted. The second factor is beyond the control of the Society. The following suggestions were made: 1) that volume 13 should be given the publication date of 1981; 2) that if publication of The Manitoba Entomologist is discontinued, the Society return to the procedure of publishing submitted papers in the Proceedings; 3) that the journal publish intermittently as papers are available following the example of Hilgardia.

Motion to Table - Conroy/Turnock: That the previous motion be tabled for consideration and action by the Executive within three months.

Carried

4(e). Regional Director to the E. S. C. (Appx. F)

Question: Loschiavo asked when the letter had been sent inviting the E. S. C. to hold a joint annual meeting with E. S. M. in 1985.

Answer: The letter was sent 5 November, 1981.

Motion - Galloway/Arntfield: Acceptance of the Regional Director's report.

Carried

## BOARD REPORTS

5(a). Endowment Fund Board (Appx. G)

Motion - Smith/Galloway: Acceptance of the Endowment Fund Board Report (D. Smith, Chairman).

Carried

5(b). Editorial Board: No report (G. Bucher, Chairman).

## COMMITTEE REPORTS

6(a). Publicity (Appx. H)

Motion - Galloway/Burton: Acceptance of the Publicity Committee report (T. Galloway, Chairman).

Carried

6(b). Social (Appx. I)

Motion - Jay/Burton: Acceptance of the Social Committee report (C. Jay, Chairman).

Carried

6(c). Youth and Education (Appx. J)

Loschiavo indicated that the committee could make a request for extra funds from the E. S. C. to support its active programme.

Motion - McGinnis/MacKay: Acceptance of the Youth and Education

Committee report (K. McGinnis, Chairman).

Carried

6(d). Insect Common Names

A. G. Robinson, Chairman, indicated that no proposals for new common names had been submitted. A working document on the common names of Canadian insects has been proofed and returned to the E. S. C.

6(e). Manitoba Environmental Council (Appx. K)

Turnock indicated that the inventory of toxic chemicals is to include agricultural chemicals.

Motion - Arntfield/Turnock: Acceptance of the report of the Representative on the Manitoba Environmental Council (P. Arntfield, Representative).

Carried

6(f). Winnipeg Insect Pest Management: No report (G. Ayre, Chairman).

6(g). E. S. C. Honorary Members: No report (J. Conroy, Chairman).

6(h). Awards (Appx. L)

Motion - Watters/Gerber: Acceptance of the Awards Committee report (F. Watters, Chairman).

Carried

6(i). Archivist (Appx. M)

The Archivist's report (J. Heron, Chairman) was submitted to the Secretary, but not presented at the Annual Meeting.

6(j). Scientific Programme

P. A. MacKay (Chairman) thanked the members of her committee for their assistance and, and she also thanked the Freshwater Institute for the use of their facilities.

Motion - Jay/Wylie: That the Society extend a special vote of thanks to the Committee for the excellence of the arrangements and facilities for the programme.

Carried

6(k). E. S. C. Fellowships and Awards

A. G. Robinson reported that the E. S. M. has proposed 4 names to the E. S. C. committee and that S. R. Loschiavo was named a fellow. Under new rules, the E. S. C. will not accept recommendations regarding fellows from the regional societies. An E. S. M. committee has been formed to recommend candidates for the Hewitt Award and Gold Medal.

## ELECTION OF EXECUTIVE

7(a). 1981-1982 Executive

Motion - Ayre/MacKay: Acceptance of the Election Committee report (G. Ayre, Chairman).

Carried

## 7(b). A. G. Robinson declared the results of the 1981 ballot for election to the 1981 - 1982 Executive. The Executive to be:

President	- B. McKillop
President Elect	- B. Webster
Past President	- A. G. Robinson
Member-at-Large	- M. Chance
Regional Director to the E.S.C.	- T. Galloway

## TRANSFER OF OFFICE

## 8(a). A. G. Robinson, President, reported that B. McKillop, the incoming President was unable to attend. He wished him a speedy recovery and announced that the Transfer of Office will take place at the first Executive Meeting.

## OTHER BUSINESS

## (a). A. G. Robinson reported that the E. S. C. has requested that the E. S. M. be responsible for the collection of its own annual membership fees.

Motion - Turnock/Webster: That the E. S. M. be responsible for collecting the E. S. M. membership fees.

Carried

- 9(b). There being no further business, A. G. Robinson called for adjournment.

ADJOURNMENT

- 10(a). Motion - Conroy: That the 37th Annual Meeting of the Entomological Society of Manitoba be adjourned.

Carried

- 10(b). The 37th Annual Meeting of the Society was adjourned at 15:30 h of the 6 November 1981.

---

R. J. Lamb  
Secretary

---

A. G. Robinson  
President



Appendix A

37th Annual Business Meeting

6 November 1981

AGENDA

1. Adoption of Agenda
2. Adoption of Minutes of the 36th Annual Business Meeting held 14 November 1980
3. Business arising from the Minutes
4. Executive Reports
5. Board Reports
6. Committee Reports
7. Notice of 1985 ESC meeting in Manitoba
8. Notice of collection of ESM annual dues
9. 1981-82 Elections Mail Ballot
10. Transfer of Office
11. Other Business
12. Adjournment

## Appendix B-1

THE ENTOMOLOGICAL SOCIETY OF MANITOBA  
STATEMENT OF RECEIPTS AND DISBURSEMENTS  
FOR THE YEAR ENDING AUGUST 31, 1981

## RECEIPTS:

Membership	250.00	
Subscriptions	510.56	
Page Charges	1,230.00	
Reprints	348.00	
Committees	240.50	
Annual Meeting	939.00	
Current Account Credits	47.93	
Donation (Royal Trust)	100.00	
	<hr/>	\$3,665.99

## DISBURSEMENTS:

Printing	4,113.66	
Stationery	67.83	
Typing	82.50	
Postage	310.05	
Bank Charges	17.77	
Committee Expenses	662.71	
Meetings - Annual	1,097.15	
Miscellaneous	40.10	
	<hr/>	6,391.77
Net Loss from Operations	(2,725.78)	
G.I.R. Investment Income	1,724.66	
Investment Interest	556.20	
	<hr/>	<hr/>

NET INCOME for year ending August 31, 1981 (\$ 444.92)

## Appendix B-2

THE ENTOMOLOGICAL SOCIETY OF MANITOBA  
BALANCE SHEET  
FOR THE YEAR ENDING AUGUST 31, 1981

## ASSETS:

Current Account Bank Balance		\$ 462.57
Savings Account Bank Balance		4,039.18
Investments: #J33544	\$2,000.00	
#Q95692	2,000.00	
#Q77695	3,000.00	
#Q0889G	3,000.00	
#JC5048	2,000.00	
#RC5523	2,200.00	
#GE0069	2,000.00	
	<hr/>	16,200.00
Petty Cash: Treasurer		25.00
Secretary		50.00
		<hr/>
		\$20,776.75

## LIABILITIES AND SURPLUS:

Liabilities	nil	
Surplus Account		
Balance as at 31/8/80	\$21,221.67	
Net Income for Period	(444.92)	
	<hr/>	\$20,776.75

Appendix B-3

THE ENTOMOLOGICAL SOCIETY OF MANITOBA  
AUDIT REPORT FOR THE YEAR ENDED  
AUGUST 31, 1981

I have examined the records of the Entomological Society of Manitoba for the year ended August 31, 1981.

In my opinion the attached financial statements present fairly the financial position of the Society as at the year ended August 31, 1981 and the results of its operations for the year then ended in accordance with generally accepted accounting principles.

Helen Samboluk

## Appendix C

## 37th Annual Meeting

## PRESIDENT'S REPORT

I consider it an honour to have been your President for the term 1980-1981, especially so because I previously had been President of our Society in the period 1959-1960. Perhaps I might be permitted to make some comparisons between those two periods, for those of you who have not had an opportunity to observe the changes which have occurred during the past 21 years.

Firstly, the membership has grown considerably, from 57 in 1959 to 141 in 1980. This in itself is a healthy sign of a flourishing Society, but there are two aspects of membership that I consider to be unsatisfactory. In 1959 a very considerable percentage of our membership were employed by chemical companies, or as we say today, by "industry". Nearly all of these persons were trained, professional entomologists, and most of them were very active in the affairs of the Society. In 1980 we have fewer members who are employed by industry, almost no one of them trained as entomologists, and mostly not participating vigorously in Society activities. I would very much like to see a closer relationship between our Entomological Society of Manitoba and all those persons working in sales or service to the chemical industry. We seem to have moved into an era of confrontation between environmentalists and the use of agricultural chemicals, and professional societies such as ours can do much to adjudicate and arbitrate.

Another aspect of our membership which has changed greatly is the percentage of our members in the Entomological Society of Manitoba who are also members of the Entomological Society of Canada, or the Entomological Society of America. The latest figure which I have is that only 20 of the members of ESM also belong to ESC. I think that our national is worthy of the support of all members of our local society, and I urge you all to join the ESC, if you are not already members.

In another way our Society activities have changed, in format and style of our annual meetings. During the past 4 or 5 years the scientific content and presentation of papers has become much more professional, and we have also made more use of distinguished guest speakers and panelists from outside Manitoba. This year has been no exception, and I would like to thank Dr. Patricia MacKay and her committee for the very considerable efforts they have made to produce the very fine scientific contributions to this 37th Annual Meeting.

We are fortunate that all our members live in or near Winnipeg, and this helps to keep a high attendance at social activities and luncheons. Dr. Cam. Jay and his social committee deserve much credit for their contributions during the past year.

And finally, I would like to thank all the other members of the Executive and of the many committees, for their support during the past year. It has been an honour and a privilege to serve as your President.

Grant Robinson  
23 October 1981

#### Appendix D

### ENTOMOLOGICAL SOCIETY OF MANITOBA, INC.

#### TREASURER'S REPORT

NOV. 6, 1981

Due to the summer mail strike, some revenue from memberships, subscriptions, page charges and reprints were not received until after the August 31st audit.

This audit indicated a loss of \$444.92 during the last fiscal year and the Society's balance at \$20,776.75.

The Society's balance as of October 31, 1981 is \$22,151.34.

Walter Askew  
Treasurer

#### Appendix E

### REPORT OF THE EDITOR OF THE MANITOBA ENTOMOLOGIST

Volume 12 of The Manitoba Entomologist was published in March, 1981. Since the cutoff date for Volume 12 (December 1980), the Editor has received 6 papers for publication in The Manitoba Entomologist: a paper from the Guest Speaker's address from the 1980 Annual Meeting,

2 full-length scientific papers, and 3 scientific notes. The current status of these 6 papers is:

Received	Accepted	Rejected	Under revision
Guest Speaker's paper	1		
Full-length scientific papers	1	1	
Scientific notes	1		2

Once the 2 papers that are being revised are returned, I intend to go to press with Volume 13. This volume will be about 30 pages in length. The Guest Speaker's paper will occupy more than half of the 30 pages. Volume 13 will be less than half the length of recent volumes. The reason for this is the shortage of scientific papers. Dr. P. H. Westdal had pointed out this problem in the reports he presented to previous Annual Meetings and had pleaded each time for more papers to be submitted. When I took over the Editor's job in January, 1981, I also pleaded for more papers. It should be obvious that our pleadings have not received much support from the Members of the Society. Since fewer papers were submitted in 1981 than in previous years and because of several recent happenings which I will outline below, I recommend that The Entomological Society of Manitoba discontinue the publication of The Manitoba Entomologist immediately after Volume 13 is published.

At least one Scientist from the Agriculture Canada Research Station, Winnipeg, was advised recently by the Director of the Station not to publish in The Manitoba Entomologist, because the time between volumes was lengthy and the circulation of the journal is limited. The Society cannot do much about the latter factor, but the former factor could be improved or solved if more papers were submitted.

One of the major agencies which gives research grants to University Faculty Members (NSERC) has advised the Faculty Members that they will receive very little credit for papers published in regional journals. The Manitoba Entomologist is one such journal. The Society cannot do much about this factor.

In conclusion, since many of the Members of the Society are being advised not to publish in The Manitoba Entomologist, it is difficult to see how it can survive. This is mainly why I am recommending that the Society discontinue publishing The Manitoba Entomologist.

George H. Gerber, Editor,  
The Manitoba Entomologist, 2 November, 1981



## Appendix F-1

## E.S.C. REGIONAL DIRECTOR'S REPORT - 1981

The Governing Board meeting was held this year at the Banff School of Fine Art at the joint meeting of the Entomological Society of Canada and Entomological Society of Alberta, October 3, 4, and 8. The E.S.C. Bulletin will contain information of general interest to the members. However, the following is a summary of items of specific interest to E.S.M. members:

First, and perhaps most important, the E.S.M. will host the ESC/ESM annual joint meeting in 1985. A letter of invitation has been extended to The National Society through Dr. G. Wiggins, President E.S.C. Specific dates, location for the meeting and local arrangements will be established at a later date.

Discussion over number and appointment of ESC Fellows continued at the Banff meeting. Dr. S.C. Loschiavo, President E.S.C. prepared a document outlining a province by province breakdown of Fellows. This document is attached to the present report for the information of ESM members. (Appendix F-2).

The ESC Membership Committee has prepared a new membership package. This material is to be sent to various institutions in Canada and should soon be available.

A note of commendation was put forward by D. J. Shorthouse, Chairman ESC Public Education Committee, to Kathy McGinnis and the efforts of the ESM Publication Education and Youth Encouragement Committee.

T. D. Galloway  
Regional Director, E. S. C.  
4 November 1981

## Appendix F-2

Members and Fellows of ESC in each province, 1980<sup>1</sup>

Province	Members	Fellows	% of members in province	% of total no. of members
Alberta	30	1	3.3	0.2
B.C.	55	8	14.5	1.9
Manitoba	20	3	15.0	0.7
N.B.	17	6	35.3	1.4
Nfld.	9	0	0	0
N.S.	16	3	18.7	0.7
Ont.	193	26	13.5	6.2
P.E.I.	2	0	0	0
Que.	55	7	12.7	1.7
Sask.	21	3	14.3	0.7
<b>TOTAL</b>	<b>418</b>			
West of Man.-Ont. border	126	15	11.9	
East of Man.-Ont. border	292	42	14.3	

<sup>1</sup>Based on those resident in Canada.

## Appendix G

## ANNUAL REPORT OF THE ENDOWMENT FUND BOARD

One bond valued at \$2,000.00 matured in July 1981 and one bond valued at \$2,000.00 was purchased in October 1981. Total investments as of this date, remain the same as for 1980.

Investments, in the form of Royal Trust Guaranteed Investment Certificates, are as follows:

<u>REG. NO.</u>	<u>AMOUNT</u>	<u>INTEREST</u>	<u>MATURITY</u>	<u>ANNUAL INCOME</u>
Q95962	\$ 2,000	9.625	April 1982	\$ 192.50
Q77695	3,000	9.375	November 1982	281.25
Q0889G	3,000	10,375	December 1983	311.25
JC5048	2,000	10.125	April 1984	202.50
RC5523	2,200	12.375	November 1984	272.25
GE0069	2,000	11.875	July 1985	237.50
CH6727	<u>2,000</u>	18.625	October 1986	<u>372.50</u>
	\$16,200			\$1,869.75

W. Askew  
 R. Brust  
 D. L. Smith, Chairman  
 5 November 1981

## Appendix H

## ANNUAL REPORT OF THE PUBLICITY COMMITTEE - 1981

Three issues (February, May and September) for Volume 8 of the ESM Newsletter were compiled and mailed to members in 1981. Additional copies were sent to Dr. D. M. Davies, Editor of the ESC Bulletin, and to the National Library of Canada. Also, beginning with Vol. 8, No. 2, issues of the Newsletter carried the assigned International Standard Serial Number (SSN), 0229-6721, in the upper right hand corner of page one.

I would like to thank members of the Society who submitted information for publication in the Newsletter. Your continued support is essential.

T. D. Galloway  
Editor, Newsletter  
4 November 1981

## Appendix I

## SOCIAL COMMITTEE REPORT

Three types of functions were held during the past year:

(1) New Members' Social

About 73 people attended the New Members' Social held in the Faculty Club at the University of Manitoba. All those in attendance thoroughly enjoyed Dr. Patricia MacKay's slide presentation of her tour of Japan.

(2) Luncheons

Three noon-hour luncheons were held during the past year with an average attendance of 26. All agreed that the speakers gave presentations that were both interesting and informative.

(3) Annual Banquet

This event was held at the Holiday Inn on November 6, 1981. About 60 members, wives and friends attended this function - and all appeared to have a thoroughly enjoyable evening.

The Chairman wishes to thank various students and individuals who assisted in preparing for the above events. We recommend that these events be continued and we urge all members to attend the various social functions which are planned by this Society.

S. C. Jay, Chairman  
4 November 1981

#### Appendix J

#### PUBLIC EDUCATION AND YOUTH ENCOURAGEMENT COMMITTEE REPORT

1981

This year has been a very busy one for this committee. Two major contributions were made to public education - the first of these was an Entomological Display at the St. Vital Centre from 18-20 June. With the tremendous support of the members of the ESM it was a success. Secondly, we initiated a program of seminars for public interest groups to help increase public awareness of the importance of Entomology in Manitoba. All the members of the ESM were sent letters to investigate their interest in this type of program. The response was very favorable. Hopefully, this program will be continued in the future.

This spring we had buttons made up for the 'Young Entomologists'. A drawing of the tiger beetle Cicindella formosa manitoba was prepared by Carol Galloway for the button.

Events with the Young Entomologists consisted of a workshop and two field trips. A film night is planned for late November or early December. On 26 April we had a workshop on making collecting equipment; 27 June we had a tour of the Cedar Bog Trail at Bird's Hill Provincial Park; 13 September we went collecting at the Fort Whyte Nature Centre. The participation at these events was excellent--it was especially nice to see so many parents also get involved with the group.

We also spoke to a number of different groups this year. These included 9 different Beaver groups; the daycare group at the University of Manitoba; the Winnipeg Adult Education Centre and the Science Teachers Association of Manitoba - so there was certainly a wide range of ages and interests.

We would like to thank all of you who participated in and

supported our various activities this year.

P. Arntfield  
V. Burachynsky  
T. Galloway  
S. Leonhard  
K. McGinnis, Chairman

#### Appendix K

##### REPORT ON THE MANITOBA ENVIRONMENTAL COUNCIL

The Council was established in 1972 to identify environmental problems, discuss environmental priorities, and to present the results to the Minister of the Environment and to the public. The present Council is made up of 99 members and has a budget of \$25,800. Some of the main priorities of the Council are the effects of: a proposed Alcan Smelter; a proposed potash mining operation; a proposed Western Power Grid; and the Garrison Diversion Project.

As your member on the Council, I am part of the Environmental Chemical Committee of the Council. Our agenda for this year includes studies of the proposed Alcan Smelter, insect control programmes in populated areas and environmental monitoring in Manitoba. For the most part, we will be concentrating our efforts on the possible effects on the environment of the proposed Alcan Smelter.

On September 28, 1981, Council Members met with Alcan representatives. A brief report of their statement was supplied and covered things such as site selection, resource requirements, and emissions. On October 2, 1981, a report from the Manitoba Government urged extensive public participation in the review, and guidelines were prepared for the environmental impact assessment process set for Alcan. According to Mr. Filmon, the environmental minister, and Mr. Gourlay, the municipal affairs minister, this environmental and socio-economic review is the most extensive of its kind ever to be undertaken in Manitoba.

Guidelines for Alcan to follow in the preparation of its environmental and socio-economic impact assessment have been established. These are now available for public review. Unfortunately, the Alcan review will only cover a period from September 1981 to December 1981. The Environmental Chemical Committee is preparing a statement requesting the Alcan study to cover at least one year. In the spring of 1982, the Manitoba Clean Environment Commission and the soon-to-be-appointed

Socio-Economic Review Commission will hold public hearings. Please prepare yourselves to participate in these hearings because soon after they are completed, the above commissions will make their final assessments and recommendations to Cabinet. Both above commission's reports will be made public. All interested Manitobans, including entomologists, are urged to participate in this review. If the impact on the environment by other smelters in Canada is any indication, no matter what controls Alcan implements, the smelter is bound to cause environmental and other problems in Manitoba.

If you wish further information about Alcan, write to:

Aluminium Smelter Impact Study,  
Box 500,  
Building 2 - 139 Tuxedo Avenue,  
Winnipeg, R3N 0H6,  
Manitoba

The Manitoba Environmental Council sponsors a cartoon contest each year with entries accepted in February and March. All Manitobans are eligible to participate. Current rules and contest categories can be obtained by telephoning 895-5337.

If I can answer any questions you may have, please telephone me at 269-7379, extension 430. If any important information becomes available concerning Alcan or any of our other projects, I will report it in the forthcoming Newsletter of the Entomological Society.

Peter Arntfield  
Entomological Society of Manitoba  
Representative on the Manitoba Environmental Council

#### Appendix L

#### ANNUAL REPORT OF THE AWARDS COMMITTEE

Nominations for the Undergraduate Student Achievement Award were requested from the Departments of Entomology and of Zoology, University of Manitoba; the Department of Biology, University of Winnipeg; the Department of Zoology, University of Brandon.

Mr. Dave Burton of the Department of Entomology, University of Manitoba, was selected to receive the 1981 Award. Mr. Burton received the B. S. A. degree in May 1981, specializing in aquatic entomology. He will continue his research towards a M.Sc. degree under

the direction of Dr. Mary Chance of the Canadian Biting Fly Centre.

F. L. Watters, Chairman  
Awards Committee

#### Appendix M

#### ANNUAL REPORT OF THE ARCHIVIST

During the past year the correspondence files at hand were reviewed and year by year summaries of information pertinent to the Society's history were compiled. A similar review of the annual "Proceedings" is now being undertaken.

In an earlier report I referred to gaps in the records which perhaps members could assist in filling. One such area is in the file of programs and program notices of the annual and semi-annual meetings. I have appended a list of those that are missing. If any member can provide these or Xerox copies of same, this would be appreciated and in doing so they would make a valuable contribution to the Society's records.

R. J. Heron  
Archivist  
15 October 1981

#### OBJECTIVES AND RULES FOR PREPARATION OF ABSTRACTS FOR SUBMISSION TO THE PROCEEDINGS OF THE ENTOMOLOGICAL SOCIETY OF MANITOBA

Editors have an opportunity to "see" into people's minds. They can immediately spot the person who genuinely wants to present nice, well-polished work. It is also equally easy for them to identify the chaotic unorganized person who submits for publication rubbish scribbled on the back of a used scrap of paper. Between these extremes are a few people who sometimes forget to study the rules for the preparation of abstracts before sending their work to the Editor. Hence, I will once again list the objectives and rules for the preparation of ABSTRACTS for submission to the PROCEEDINGS.



OBJECTIVES:

1. A uniform format is essential for the good presentation of the Proceedings. This format must survive from year to year. Format includes such things as the proper centering of a title and author's name. Another example is the use of upper case lettering for titles, etc.
2. A uniform style of writing the abstracts is necessary so that objectives, results, and conclusions are clearly stated and can be found easily by the readers.

RULES:

1. Each abstract must have a title in upper case lettering, be centered, and typewritten double-spaced.
2. The author's name(s) must be in upper case. Initials must precede the surname. There must be 1.5 double spaces between the title and author's name.
3. The author's work address must be in lower case lettering, but capitalized. The address must be double-spaced if it is longer than one line. There must be a single double space between the author's name and address.
4. The abstract must be indented 5 spaces. The word ABSTRACT must be written in upper case lettering and must be followed by a colon. The word abstract must be the first word of the first line of the abstract. The abstract itself must be separated by 1.5 double spaces from author's address.
5. All abstracts must not exceed 350 words (about 1.5 pages of double spaced typing), and must have 3 cm margins.
6. Abstracts of original research must consist of:
  - a) a brief introduction which contains the objective(s) of the work.
  - b) a brief description of the methods.
  - c) a synthesis of the results obtained.
  - d) the relevant conclusions that are reached.
7. Abstracts of reviews of the literature must contain:
  - a) a real synthesis of work done

7. b) must reach a conclusion. To say that more work needs to be done is useless.
8. Abstracts that are so general, nebulous, or superficial, that their contents can be found in any good text, will be rejected.

Philip S. Barker, Editor  
Proc. Entomol. Soc. Manitoba

#### MEMBERSHIP LIST

I was instructed, at the Annual General Meeting, to publish the Membership list.

The membership List cannot be published in the Proceedings, because it is too expensive to do so; we are caught between rising costs of production and the diminishing purchasing power of the Membership's Dues. Rising expectations on the part of the Membership, for an ever better Proceedings, can only exacerbate our financial woes.

However, all is not lost, and the Membership List will be published in the Newsletter, on instructions from the Executive of the Society, at a greatly reduced cost.

Philip S. Barker  
Editor,  
Proceedings Entomol. Soc. Manitoba