

Proceedings of the
Thirtieth Annual Meeting
of the
ENTOMOLOGICAL SOCIETY
of
ALBERTA



October 21-23, 1982
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Vegreville, Alberta

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**PROCEEDINGS OF THE
30TH ANNUAL MEETING
OF THE
ENTOMOLOGICAL SOCIETY OF ALBERTA**

October 21-23, 1982

Vegreville, Alberta

Editor

W. A. Charnetski

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PRESIDENT'S WELCOME

30th ANNUAL MEETING ENTOMOLOGICAL SOCIETY OF ALBERTA

Vegreville, Alberta

October 21-23, 1982

On behalf of the Executive of the Entomological Society of Alberta, I would like to welcome you to our 30th Annual Meeting. This is the 1st meeting of the society independent of any other groups in three years. In 1980, we met with the Entomological Society of Saskatchewan and in 1981, we met jointly with the Entomological Society of Canada. This year's meeting does not have a specific theme but is hoped to allow we entomologists in Alberta an opportunity to mingle, socialize, and discuss common areas of interest, difficulty and concern.

The period of restraint which is presently in vogue and in many cases justified, will place pressure on programs in all sectors of biology, including entomology. I ask young students not to despair since this cycle is not new and I'm sure all of us as graduate students went through times of concern regarding our economic future. I might suggest that although basic and applied research are both essential to further entomology, economics may force changes towards justifying our research in economic terms. No one can predict where we will find ourselves in the future but I believe the training of future entomologists must, as Dr. E. J. LeRoux in his keynote speech at the Saskatoon meetings stated, consider "priority on board training in pest management principles including chemical control, biological control, and systems modelling. We will need graduates who bring these principles and systems together in developing pest management programs that are economically and environmentally acceptable." I leave you with the challenge to meet these needs today and in the future. Enjoy the meetings.



M. G. Dolinski, President
Entomological Society of Alberta

**ALTERNATIVE MATING TACTICS AMONG MALE WATER-STRIDERS:
POSSIBLE EFFECTS OF INTROGRESSION**

J. R. Spence

Department of Entomology, University of Alberta, Edmonton, AB

Three lines of evidence suggest that Limnoporus dissortis Drake and Harris and L. notabilis Drake and Holtes hybridize extensively in central British Columbia. Distributions of body size for both sexes are bimodal for Limnoporus in the suture zone but significant numbers of intermediate-sized animals occur. The species have been crossed successfully in the laboratory but all F₁ progeny have been males. However, F₁ males appear to be fully fertile, at least when backcrossed to the maternal species. Interspecific matings have been commonly recorded in field populations. Mating behaviour in these species involves communication by surface waves and defense of oviposition sites by some males. Mating signals of both species have been recorded and compared from zones of allopatry and sympatry and no differences have been found. Males do not show the same reproductive tactics. In addition to signaling plus defending sites, some males signal without defending sites and others appear to do neither. Signaling behaviour is more common in populations of L. dissortis near the zone of introgression than in populations studied from eastern Alberta. No signaling has been recorded from populations studied from eastern North America. These data suggest that signaling and defense of oviposition sites may have been passed onto L. dissortis through introgression with L. notabilis.

=====

THE EFFECTS OF AN EGG PARASITE ON POPULATION DYNAMICS OF WATER-STRIDERS

J. S. Scott and J. R. Spence

Department of Entomology, University of Alberta, Edmonton, AB

We have discovered that a small scelionid wasp, Tiphodytes gerriphagus, affects gerrid populations in the field through extensive parasitism of eggs. Female wasps locate eggs on floating vegetation by palpating the edges with their antennae although exact cues used are unclear. Once gerrid eggs are located a female may oviposit from the edge of the leaf or she may submerge entirely along the edge. We have established that eggs of all pond-dwelling gerrid species in Alberta may be parasitized. Eggs laid at the surface are parasitized more frequently than those laid under water. Rates of parasitism were exceptionally high in central Alberta during 1981 and 1982 reaching 95-100% by early July. Surveys in 1982 showed that parasitism is geographically widespread throughout central Alberta and east-central British Columbia. We conclude that egg parasitism represents an important and unexplored mortality factor in gerrid populations.

=====

**WATER-STRIDERS AGROUND OR ADRIPT? - THE EVOLUTIONARY STRATEGY OF
THE EOTRECHINAE (HEMIPTERA: GERRIDAE)**

N. Møller Andersen

Zoological Museum, University of Copenhagen, Denmark

Water-striders are the most successful group of insects living on the surface film of water. Species of the Oriental genus Eotrechus Kirkaldy are unique among water-striders because they have apically- instead of preapically-inserted tarsal claws. Recent observations suggest that these water-striders are more or less terrestrial in habits and probably represent a remarkable case of evolutionary reversal in structural adaptations, behaviour, and habitat preferences.

=====

**ASPECTS OF THE LIFE HISTORY AND ECOLOGY OF PSEUDIRON CENTRALIS McDUNNOUGH
(EPHEMEROPTERA: HEPTAGENIIDAE)**

D. A. Soluk

Department of Zoology, University of Alberta, Edmonton, AB

Pseudiron centralis is one of a number of rare species of Ephemeroptera found in association with larger rivers. Though few individuals have been collected, P. centralis appears to be widely distributed in North America. Study of the life history and ecology of this species indicates that its apparent rarity is a function of several factors: 1) the difficulty of utilizing conventional sampling techniques in the sandy reaches frequented by P. centralis; 2) the unusual life cycle exhibited by this species, in which most of the year is spent in the egg stage; 3) the low larval densities exhibited by this species; and 4) the shift in microhabitat association from marginal areas to areas of moving sands during larval development. Increased research effort in the lower reaches of river systems will probably indicate that P. centralis and some of the other 'rare' riverine species of mayflies are much more common than is currently believed.

=====

MATERNAL INFLUENCE ON DIAPAUSE IN THE MOSQUITO, Aedes vexans (MEGIEN)
(DIPTERA: CULICIDAE)

B. W. Taylor

Pesticide Chemicals Branch, Alberta Environment, Edmonton, AB

Laboratory experiments conducted under controlled photoperiodic and temperature conditions show that embryonic diapause in Ae. vexans is induced by environmental factors acting on the parent (P) female. While both photoperiod and temperature are identified as environmental stimuli to which the P females are sensitive, photoperiod is regarded as the predominant influence on the induction of embryonic diapause via the P female.

A field experiment, designed to delineate the phenological responses of Ae. vexans populations under natural photoperiodic and temperature conditions, provided a comparison and correlation with physiological responses produced under laboratory conditions. The results of this experiment provide evidence that P females in Winnipeg, Manitoba (49° 55' N. Lat.) produce diapause eggs during late July.

=====

THE EFFECTS OF IRRIGATION ON MOSQUITO PRODUCTION

P. J. Scholefield

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Alberta Environment, Deerfoot Square, Calgary, AB*

Mosquito control programs, situated within the irrigated areas of southern Alberta, tend to use more pesticides than those outside such areas to operate an effective control program. This is due to mosquitoes migrating into the control area from the surrounding irrigated land. Because the Pesticide Chemicals Branch of the Pollution Control Division of Alberta Environment administers these programs through the Biting Fly Financial Assistance Program, and its mandate is the judicious use of pesticides, a reduction of the amount of pesticides used would be desirable. For this reason, a mosquito awareness campaign was initiated among the farmers of southern Alberta to make them more conscious of the mosquito problem. Hopefully, this would result in a reduction of excess standing water which would reduce mosquito production and benefit both the farmer and those operating a mosquito control program. The awareness campaign included a questionnaire and poster with follow-up literature. The response to these have been favorable, and will be expanded in 1983 to include use of the media.

=====

SOME PATHOGENS AND PARASITES IN MOSQUITOES IN ALBERTA

J. A. Harlos and B. W. Taylor

Pesticide Chemicals Branch, Alberta Environment, Edmonton, AB

A continuing survey of mosquito populations in Alberta has been conducted since August, 1980, to determine the presence and incidence (abundance) of internal pathogens and parasites in mosquitoes. To date, protozoa, fungi, or nematodes have been observed in 18 species of mosquitoes; the most common pathogens are Microsporidia (Protozoa; Nosematidae) and Coelomomyces (Blastocladales: Coelomomycetaceae).

The occurrence and effects of external parasites, specifically mites, has been noted on 3 species during this survey.

=====

ROOT MAGGOTS (DELIA SPP., DIPTERA: ANTHOMYIIDAE) ON CANOLA:

SPECIES COMPOSITION AND PHENOLOGY

G. C. D. Griffiths

Department of Entomology, University of Alberta, Edmonton, AB

and

H. J. Liu

Alberta Environmental Centre, Vegreville, AB

A survey conducted during 1981 showed that the most serious damage to Canola occurred in North-Central Alberta, with the most abundant pest species being Delia radicum (L.) and D. platura (Meigen). Adults and larvae are adapted to cool, moist conditions. Persistent hot, dry conditions during June 1982 caused much of the reproductive potential of the enormous numbers of D. radicum resulting from the previous year's infestation to be lost: by the time heavy rains came in the first week of July, most of the flies of this species had died. However, large numbers of D. platura survived the drought and invaded the fields when the rains came. Crop damage during 1982 appears to have been less than in 1981. Both D. radicum and D. platura appear to be partly univoltine in Central Alberta. Since females of neither species became gravid before mid-June, adults of partial second generations could not have emerged before the end of July. Increases in numbers following the heavy rains of early July can only be attributed to increased activity.

=====

**BACILLUS THURINGIENSIS AND BLACK FLIES AT THE
UNIVERSITE DU QUEBEC A TROIS RIVIERES**

J. Boisvert

*Department de Chimie-biologie, Université du Québec a Trois-Rivières
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Using a controlled environment, studies were undertaken to test the efficacy of Bacillus thuringiensis serotype H-14 (B.t.i.) as a biological control agent against black flies. The effect of temperature, concentration and pH were tested against a summer species and a winter species. All three factors were found to affect markedly the percentage of mortality. Also, the two different species of black flies responded in a different way to the temperature parameter. The winter species was more susceptible at low temperature than the summer species and vice versa at high temperature. Our results have shown that B.t.i was 100% more effective at low temperature (4°C) than temephos (Abate). We also studied the ultrastructure of the toxic crystals by electron microscopy. The crystals were found to be heterogenous in shape and in size. On the other hand, there was a definite internal organization. The basic sub-unit has an hexagonal shape giving rise to a graphite type of organization. The whole crystal seems to be composed of superimposed leaflets.

Studies are underway to test B.t.i. on the field and to further elucidate the mechanism of action of the crystal.

=====

**A SIMPLE VOLUMETRIC INSTRUMENT TO ESTIMATE BIOMASS OF
FLUID-PRESERVED INVERTEBRATES**

J. H. Ciborowski

Department of Entomology, University of Alberta, Edmonton, AB

Placing preserved animals in the wide arm of a fluid-filled U-shaped open tube provides an accurate linear measure of biomass. Changes in fluid level are monitored by projecting an image of the tube into a dissecting microscope equipped with an ocular micrometer. Precision of the calibration curves is equivalent to length-weight regressions. However, only a single curve need be generated to predict wet weight of many taxa. Separate calibration curves are required to predict dry weights of hard- and soft-bodied taxa.

=====

DEVELOPMENT IN HORN FLY CONTROL IN RANGE CATTLE IN ALBERTA

H. G. Philip, and M. Herbut

Entomology Section, Alberta Environment Centre, Vegreville, AB

The efficacy of three synthetic pyrethroids and three application devices was evaluated for horn fly control on beef cattle in pastures. Almost 100% control was achieved using cypermethrin- and permethrin-impregnated ear tags at a ratio of 1 tag per mature animal. Fenvalerate-impregnated ear tags, when applied only to nursing calves in a herd, provided a similar level of control. Permethrin-impregnated tail tags (1 tag per cow) reduced horn fly numbers satisfactorily, however, all tags became detached and lost within 5 weeks post application. Fenvalerate 0.25% and 0.5% ready-to-use backrubber solution provided excellent control for the second consecutive year when applied through self-treatment oilers.

=====

EFFICIENCY OF SAMPLING FOR LARVAE OF MAMESTRA CONFIGURATA WLK.

(LEPIDOPTERA: NOCTUIDAE)

H. J. Liu

Alberta Environmental Centre, Vegreville, AB

The spatial pattern of larvae of Mamestra configurata in Canola was described by the negative binomial distribution. For values of k approaching 7.0, a minimum number of 25 samples was required to estimate population densities at the economic threshold of 20 larvae per m^2 with a confidence level of 95% and a half-length confidence interval of 25% when sampling was undertaken at peak of either 3rd- or 4th-instar larvae. Although using this sample size is not time-consuming for researchers who are determining population structure as well as density, it is too large to be adopted by Canola producers. It is suggested that development of a sequential sampling scheme, which growers can use in making control decisions, is required.

=====

STRUCTURAL PEST CONTROL - AN OVERVIEW

A. Schaff

PCO Services, Edmonton, AB

(No abstract submitted)

=====

**SOME ASPECTS OF THE BIOLOGY AND CONTROL OF LYGUS SPP.
INFESTING ALFALFA IN THE PEACE RIVER REGION**

R. Butts

Alberta Agriculture, Fairview, AB

Twenty-one alfalfa fields were monitored for *Lygus* bugs from 1980 to 1982. The main species present were *Lygus borealis* and *Lygus lineolaris*. Losses due to seed blast varied from 4 to 30% of the seed yield. A single spray treatment was most effective if applied when the *lygus* adults first entered the field.

=====

**AN UPDATE ON THE EUROPEAN CORN BORER, OSTRINIA NUBIALIS
(LEPIDOPTERA: PYRALIDAE), IN ALBERTA**

A. M. Harper, N. Collard, C. E. Lilly

Agriculture Canada Research Station, Lethbridge, AB

and

U. Soehngen

The European corn borer was first discovered in Alberta in 1956 and appeared to have been eradicated by a thorough cultural control program. In 1981, the insect was found in several fields near Medicine Hat and in one field at Bow Island. Two fields were infested below the 5% level and all other fields were below the 1% level.

This year, the corn borer has become established in the Medicine Hat area at levels of up to 75% infestation and with up to 11 larvae per stalk. The area and intensity of infestation at Bow Island has increased. The insect has not been found in other areas of the province.

At present, the corn borer is localized only in corn. There still appears to be a possibility of eradicating the insect by cultural controls.

=====

**ATTACHMENT SILK AND COCOON SILK IN LARVAE OF
SIMULIUM VITTATUM (DIPTERA: SIMULIIDAE)**

W. B. Barr

Department of Entomology, University of Alberta, Edmonton, AB

Labial glands of *S. vittatum* larvae produce at least two different silks: one during the first six instars, and a second during the last instar. The two silks found in labial glands differ in amino acid content. These differences in content, and the dissimilar abilities of silk in larval attachment pads and cocoons to rotate polarized light suggest that the two have different physical properties suited for their different roles.

=====

THE PEA APHID AND VERTICILLIUM WILT OF ALFALFA

A. M. Harper, H. C. Huang, E. G. Kokko
Agriculture Canada Research Station, Lethbridge, AB

and

R. J. Howard
Brooks Horticultural Centre, Brooks, AB

Verticillium wilt caused by Verticillium albo-atrum, a most destructive disease of alfalfa in Europe, has become a new devastating disease in the Pacific Northwest, B. C., and Alberta. Surveys during the past three years indicate that the disease is confined to irrigated alfalfa in southern Alberta.

Recent investigations showed that spores of V. albo-atrum are produced on the stems of alfalfa and can be readily isolated from winged and wingless pea aphids collected from irrigated alfalfa fields. Greenhouse studies proved that the aphids could transmit verticillium spores, resulting in the development of verticillium wilt on healthy alfalfa plants.

=====

COMPARISON OF THREE HOUSEFLY (MUSCA DOMESTICA L.) POPULATIONS USING POLYACRYLAMIDE GEL ELECTROPHORESIS

J. M. Stanger
Department of Entomology, University of Alberta, Edmonton, AB

Three housefly (Musca domestica L.) colonies were established with flies collected, near Clamar, Alberta, from a pigbarn, chicken barn, and a feedlot, respectively. The houseflies breeding in the pigbarn had previously been shown to be resistant to several insecticides. Houseflies from these colonies were compared by polyacrylamide gel electrophoresis using six enzyme systems. Variation was found in tetrazolium oxidase (TO), octanol dehydrogenase (ODH), alkaline phosphatase (ALKPH), and glucose 6-phosphate dehydrogenase (G6-PDH), but not in alpha-glycerphosphate dehydrogenase (alpha-GPD), nor in malic acid dehydrogenase (MDH). The phenotypic frequencies in the three housefly populations indicated that each population was in Hardy-Weinberg equilibrium. The colonies were genetically similar but were not identical, differing in allele frequencies and in mean heterozygosity. The insecticide-resistant colony, originating from the pigbarn, was significantly different from the other colonies with respect to allele frequencies at the locus for G6-PD.

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THE PASSAGE OF INDIGESTIBLE FRAGMENTS THROUGH THE GUT OF THE
ADULT CARABID PTEROSTICHUS ADSTRICTUS

M. Cheeseman

Biology Department, University of Calgary, Calgary, AB

The results of an experiment examining the movement of Drosophila remains out of the crop of the adult carabid Pterostichus adstrictus, indicate that all the indigestible cuticular portion is retained for a period before crop emptying begins. Once crop emptying commences, a diminishing amount of material is lost per unit time. The rate at which this occurs is dependent on temperature.

This temporary delay in the passage of indigestible material is probably the consequence of the retention of soft tissues in the crop whilst they undergo preliminary digestion.

The temporary delay in the passage of indigestible material may serve an additional important function. It may allow the initiation of the formation of the peritrophic membrane prior to the admission of these potentially abrasive fragments into the mid-gut. Peritrophic membranes can only be recovered from recently fed carabids.

The indigestible fragments undergo a secondary trituration during their passage through the proventriculans, and this would also facilitate their passage through the mid-gut.

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EFFECTS OF SESTON TYPE ON THE GROWTH OF NEURECLIPSIS BIMACULATA (TRICHOPTERA)

J. S. Richardson

Department of Zoology, University of Alberta, Edmonton, AB

The filter feeding caddisfly Neureclipsis bimaculata is essentially restricted to lake outflow streams. At most times of the year, the amount of suspended organic matter (seston) is about the same at the outlet of Lac Ste. Anne as it is 17 km downstream. In the laboratory, larvae fed lake outlet seston grew significantly faster than larvae fed seston from downstream reaches. In a field experiment, larvae were placed in marked cages at 2 field sites and grew significantly faster at the lake outlet. Many larvae fed on seston from downstream reaches lost weight during the experiments. Changes in the composition of seston downstream from lakes is an important determinant of growth rate and distribution of populations of N. bimaculata.

=====

FORESTS, TREES, AND HYPOTHESES

G. E. Ball

Department of Entomology, University of Alberta, Edmonton, AB

One complete reconstruction (referred to below as the basic hypothesis) for the phylogeny of the six genera of the carabid tribe Galeritini was proposed previously. This is represented by a single tree in a hypothetical forest of nearly a thousand such trees. Relationships indicated by the basic hypothesis are as follows: one trichotomous grouping, including Ancystroglossus, Planetes, and Galerita, with Prograleritina as sister group; and the sister group of these four genera being the common stem of the genera Eunostus and Trichognathus, which are sister groups of one another. Additionally, two arrangements of galeritines have been proposed that provide the basis for inferring phylogenies different from that of the basic hypothesis. This amount of variation in views of competent workers suggested that another appraisal of the basic hypothesis was desirable.

Examination of additional character systems revealed that two parallel transformation series (one for mandibles, and one for stylomere 2 of the ovipositor) could be inferred, that required an arrangement of taxa different from that of the basic hypothesis. A new hypothesis is accordingly proposed. Sister group relationships are indicated by the following sequence of generic names, with each taxon being sister group of those whose names appear to the right, except that the last two are sister groups of one another: Planetes, Eunostus, Ancystroglossus, Trichognathus, Prograleritina, and Galerita. Planetes is probably most like the ancestral stock in the structural features of its adults.

Consistent with new hypothesis is the pattern of variation of body size: members of the more primitive groups are smaller, while those of the more derived groups are larger. Such congruence is regarded as a test of the new hypothesis. However, more extensive tests can be conducted in terms of variation patterns of character systems that have yet to be exploited, such as internal features of adults, external and internal features of immature instars, and those features examined by means of electrophoretic techniques. All of the 945 theoretically possible trees representing the phylogeny of this group could be tested. In practice, those receiving consideration will likely be inferred by preliminary empirical data, that are at variance with previous reconstructions.

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PRELIMINARY OBSERVATIONS ON BEHAVIOUR OF SALMON-EYED MALE

GLOSSINA MORSITANS MORSITANS

R. H. Gooding

Department of Entomology, University of Alberta, Edmonton, AB

Circadian activity and reactions to a moving image were studied in post-teneral wild-type and salmon-eyed male Glossina morsitans morsitans Westwood (Diptera: Glossinidae) using equipment at Imperial College, Silwood Park, England. Both phenotypes were active at approximately the same time in the morning and in the late afternoon/early evening. In an actograph having 30-minute crepuscular periods before and after a 12-hour photophase, salmon males were active sooner each morning, but they had slightly fewer activity periods and these bursts of activity were significantly shorter. In a flight space (100 x 50 x 50 cm) salmon males were more responsive to an image which was moving at 5° per sec. In mating competition experiments, in 15 x 8 x 4.5 cm cages, salmon males were less successful than were wild-type males.

=====

ALLELOCHEMICAL CONTROL OF ZONATION IN AN INTERTIDAL BEETLE

W. G. Evans

Department of Entomology, University of Alberta, Edmonton

Populations of the intertidal carabid beetle, Thalassotrichus barbarae (Horn), are, like other marine organisms, distributed in distinct horizontal zones in intertidal habitats. All stages of this species are found in crevices, though adults forage outside at night during low tide periods. Crevice substrates are soil-like in texture, cation exchange capacity, and organic matter content making them favorable for growth of detritivorous bacteria and for T. barbarae larvae which feed on stranded zooplankton brought in during high tides. Bioassays of extracts of substrates indicated that adults were attracted to metabolites, probably emitted by bacteria, that act as habitat cues for these beetles. Responding to these chemical stimuli enables the adults to select crevice habitats in the appropriately situated horizontal zone.

=====

A NEW SIBLING OF SIMULIUM ARCTICUM FOUND IN THE ATHABASCA RIVER

(DIPTERA: SIMULIIDAE)

W. S. Procunier and J. A. Shemanchuk

Agriculture Canada Research Station, Lethbridge, AB

Differences based on successional, chromosomal, and biological parameters indicate that four sibling species may be present at the Athabasca River. These are IIL-1, IIS-10,11, IIS-10,11 (IL-8) and IIL-2 arcticum. IIS-10,11 arcticum differs from IIL-st. arcticum by a 2-step inversion in IIS, which places the Ring of Balbiani more proximal to the centromere. This sibling also lacks a typical chromocentre being fixed for thin centromere bands, and has no obvious sex differential segment. IIL-1 arcticum occurs as mature larvae while IIS-10,11 is developed only to first and/or second instar on May 19. A second wave of mature larvae on June 22 conforms to IIS-10,11 in terms of "gross" chromosome landmarks but differs biologically with last instar male larvae showing sperm. Mature male larvae of May 25 show predominantly spermatogonia. There is a suggestion that inversion IL-8 is partially sex linked in IIS-10,11 males of August 24. IIS-10,11 (IL-8) and IIL-2 arcticum occur sympatrically at this time.

=====

PRELIMINARY REPORT ON THE SUN-SPIDERS (ARACHNIDA, SOLPUGIDA) OF CANADA

R. G. Holmberg

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and

D. J. Buckle

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At the present time, the species and distribution of solpugids that occur in Canada are as follows:

<u>Taxonomic Names</u>	<u>Distribution in Canada</u>		
	<u>British Columbia</u>	<u>Alberta</u>	<u>Saskatchewan</u>
Eremobatidae			
Eremobatinae			
Eremobates docolora		Yes	Yes
Brookhart and Muma			
E. gladiolus Muma	Yes		
E. pallipes (Say)			Yes
E. scaber (Kraepelin)	Yes	Possibly	
Therobatinae			
Eremochelis Roewer			
(=Therobates Muma)		Yes	
-branchi group			
Hemerotrecha species	Yes		
near denticulata Muma			

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DERMACENTOR ANDERSONI (STILES): SEQUENTIAL INFLAMMATORY CELL
PICTURE IN FEEDING LESIONS OF NYMPHAL TICKS ON RABBITS

W. A. Nelson

Agriculture Canada Research Station, Lethbridge, AB

J. F. Bell

Washington State University

and

S. J. Stewart

Rocky Mountain Laboratory

Details of the inflammatory cell response in the skin of rabbits exposed to nymphal D. andersoni feeding are presented. In the sensitization response, neutrophil was the predominant cell found over the first 7 days. Then, on the 6th and 7th day, lymphocytes and eosinophils began to increase significantly; this was interpreted as signalling the onset of immunological sensitization.

To sensitized rabbits exposed to symphal ticks in the same way, neutrophils, eosinophils and lymphocytes responded rapidly within 24 hr. of attachment, and thus their numbers appeared to be related to sensitization. The numbers of inflammatory cells in feeding lesions on sensitized rabbits were about double those found during the sensitization exposure. The possible relationship of the cellular response to transmission of Yersinia tularensis by ticks was discussed.

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Executive Meeting M. Steiner H. Philip R. Holmberg R. Butts		Alberta Environmental Centre		Ukrainian 'Pysanka'		The AEC Plant	
W. Procunier G. Hilchie		A. Nimmo J. Ciborowski		W. Charnetski		H. Philip R. Gooding C. Soluk	
J. Ryan		D. Craig					
C. Hergert J. Shemanchuk A. Hergert		H. Philip J. Shemanchuk M. Dolinski		G. Ball J. Shemanchuk K. Ball		A. Nimmo	
W. Procunier R. Gooding		Ukrainian Greek Orthodox Church		M. Dolinski J. Scott		N. Anderson D. Soluk	
Sad Blackfly		W. Pro- cunier		P. Schofield		ESA Prize D. Lee M. Dolinski	
B. Taylor		G. Griffiths		J. Bois- vert			
Mosquito Advert.		Queue for Lunch ... ?		W. Procunier D. Craig G. Griffiths		J. Shemanchuk U. Soehngen	
R. Holmberg							
Down the Hall!		J. Gurba J. Ryan B. Taylor D. Craig		... Most Interesting ...			



THIRTIETH ANNUAL MEETING - VEGREVILLE - 1982

... eh?			J. Gurba	B. Taylor	J. Ryan	Aquatics
G. Ball	Annual Business Meeting M. Dolinski R. Butts		J. Shemanchuk H. Cerezke	R. Holmberg M. Steiner		A. Harper B. Schaber
D. Soluk J. Stanger W. Barr J. Ciborowski		Window Dressing Supreme		... Like bees to honey ...	J. Ciborowski D. Craig J. Gurba H. Liu	
S. Cheeseman	Dinner				T. Bakshi K. Ball	
D. Craig H. Liu L. Soluk D. Soluk J. Stanger		"Head Table" B. Taylor R. Holmberg M. Dolinski T. Bakshi K. Ball		T. Bakshi		J. Ryan A. Hergert
M. Steiner W. Procunier		J. Gurba U. Soehngen		M. Hussien	J. Spence	C. H e r g e r t
G. Ball	R. Gooding	G. Evans	B. Taylor	R. Holmberg	W. Nelson	'Vegreville'

ENTOMOLOGY SOCIETY OF ALBERTA

Executive Meeting

May 28, 1982

Meeting to order: 11:30 a.m.

Present: M. Dolinski, R. Holmberg, J. Shemanchuk, H. Philip, B. Taylor,
B. Charnetski, R. Butts.

1.0 Adoption of Minutes

Adopted as corrected and presented - moved by J. Shemanchuk. Seconded by H. Philip

2.0 Business Arising from Minutes

- 2.1 H. Philip mentioned Collin Hergert was looking for guidelines. Executive should find out whether he got it and if not, he should be helped to find them.
- 2.2 Membership forms should be circulated to Lethbridge, Calgary, U of A and copies to R. Butts. H. Philip will send them.
- 2.3 Auditing is delayed because Gooding is away.

3.0 Correspondence

Dieter Peshkin requested a list of companies for their meeting. Possibly set up displays. H. Philip, letter about bonds was sent to R. Butts.

4.0 1981 Banff Conference Report

B. Charnetski gave joint financial report.

5.0 ESA General Account

As of December 31, 1981	\$1865.17
Petty cash	8.07
	<hr/>
	1873.24

6.0 Committee Report

- 6.1 Membership - None

6.2 Honorary membership - deferred to next meeting, we have a full slate, allowed 5% of membership.

6.3 Editor - ESA financial Report not audited so the proceedings are held up. Some papers are still to be edited.

6.4 Public Education - No report

6.5 Awards - Deadline November 1, 1982 for 1983.
Gold Medalist - Paul Reigert possibly.
Hewitt - executive should look up and submit a name.

6.6 ESC Directors Report: J. Shemanchuk

a) Committee of Destructive Pests - there is work being done on: onions, apples, potatoes, and reports will be submitted for annual meeting.

b) Joe Shemanchuk is still collecting information for dossier of entomologists.

6.7 Environment Council of Alberta: J. Shemanchuk

a) Annual meeting will be held in Medicine Hat on December 9, 10, and 11, 1982. Theme - Dollar and Sense in Water Management. Topics to be discussed: Garrison Project, Hort Station will talk on self-sufficiency, economics of water use.

b) There will be a Public Hearing on the preservation and maintenance of the Agricultural Land Base. Information meetings are being held now.

c) ECA - has made a response to the Hall Report - did not agree with the presentation - if Alberta goes into this new means of registration it will result in a complete failure.

7.0 By-Laws of Entomology Society

H. Philip - no changes - By-Laws will be presented in proceedings.

8.0 Biological Survey of Canada

John Spence is the Chairman. J. Shemanchuk - Aquatics survey - going well.

9.0 Other Items

9.1 Hall Report - should ESA respond? Mike Dolinski has written to find background of committee involved in the report and is waiting to see what AIC has to say. J. Shemanchuk suggested appointing 3 members to review that Hall report and make submission to the annual meeting.

Possible suggestions: Jim Ryan, Joe Gurba, Doug Craig, and someone from Alberta Environment. Report should be submitted by August 30, 1982. Do we want to inform the ESC? Joe Shemanchuk will approach the ESC to tell them of what we are doing and find out what they are doing.

9.2 1982 ESA Meeting - October 21-23, 1982, Vegreville - AEC
Estimate 60 members attending.

Arrangements - H. Philip, centre, A. V. (Photographer if needed).

Chairman - Scientific Committee, Helen Liu - tentative, call for papers should go out immediately.

Business Meeting - Executive.

Local Arrangements - Marilyn Steiner.

Conference Chairman - Mike Dolinski invite president of ESC.

Registration - Rick Butts.

10.0 Next meeting

The next meeting will be held on October 21, 1982 - 7.00 p.m.

The meeting was adjourned at 1:00 p.m. on a nomination by Bruce Taylor.

ENTOMOLOGICAL SOCIETY OF ALBERTA

Executive Meeting

October 21, 1982

Meeting called to order - 4 p.m.

1.0 Adoption of Minutes

Adopted minutes as circulated and corrected - moved by H. Philip.
Seconded by Bruce Taylor.

2.0 Business Arising from Minutes

- 2.1 C. Hergert was contacted about the collection competition. He will get guidelines from U of A.
- 2.2 Membership forms will be given to R. Butts and from there circulated to members concerned.

3.0 Recommendations from Joint Committee

- 3.1 ESC Scholarship \$1,500.00 donation. H. Philip moved that we accept the recommendation that we donate \$1,500.00 to the ESC Scholarship Fund. Seconded by Bruce Taylor.

M. Dolinski suggested putting some of our funds into one main scholarship for the province (possibly \$200.00). We could also name the fund after someone (e.g., Dr. Hocking). M. Dolinski will bring it up at the general meeting.

- 3.2 An Honorarium should be given to the accountant who did the books for the joint meeting. M. Dolinski moved that ESA will provide an Honorarium to the accountant Rex Little (in the amount of a maximum of \$150.00) for going through joint meeting finances. Seconded by B. Taylor.
- 3.3 The accountant should provide a covering letter with this final financial report. B. Charnetski will ask for a letter from the accountant.
- 3.4 The funds from the ESC-ESA joint account be transferred to the ESA general account. This will be presented for approval at the general meeting.
- 3.5 The joint committee be disbanded. B. Taylor moved that the joint committee which has done an excellent job be given thanks and disbanded. Seconded by M. Dolinski.

3.6 The present scholarships should be increased to \$200.00 available to each of the three universities involved. The executive will appoint an awards committee to look into establishing a new award and bring it up at the next executive meeting in order that it may be implemented this year. The membership will be asked to give the executive the power to make this decision. The membership will also be asked to name it.

4.0 Financial Report

Rick Butts reported that the interim balance in the general account was \$9,819.17

5.0 Membership

Deferred until general meeting.

6.0 Editors Report

None available

7.0 Correspondence

None

8.0 ESA Prize

The ESA prize was awarded to Dennis Lee of the U of A. The prize included \$50.00 from ESA and \$60.00 from U of A staff.

9.0 ESC Awards

No submissions were received.

10.0 Resolutions Committee

H. Philip and R. Gooding were nominated.

11.0 Nominating Committee

M. Dolinski, B. Taylor and R. Butts were appointed.

12.0 Auditors

J. Spence and B. Mitchell were nominated.

13.0 Insect Collection

In the absence of Collin Hergert, Hugh Philip said there were 38 collections in the competition.

14.0 ESC Director Report

None available

15.0 Environment Council of Alberta Report

None available

16.0 New Business

B. Nelson suggested that membership fees should be raised to \$5.00. This will be presented to the membership.

The meeting was adjourned at 6:30 p.m. on a motion by B. Taylor.

ENTOMOLOGICAL SOCIETY OF ALBERTA

Annual Meeting

22 October, 1982

Meeting called to order - 4:00 p.m.

1.0 Adoption of Minutes of 1981 Meeting

J. Shemanchuk moved adoption as circulated.
Seconded by G. Ball - Carried.

2.0 Treasurer's Report

R. Butts reported an interim balance as of 22 October 1982, of \$9819.17 in the general account. Moved by R. Butts, seconded by U. Soehngen.

3.0 ESA Prize

Dennis Lee of University of Alberta was awarded \$50.00.

4.0 Biological Survey of Canada - J. Spence

- Alive and well - all projects doing well.
- Project on Yukon & Northern Euplusion project almost to the point of a written report.
- If anyone wants to contribute, please do so.

5.0 Regional Directors Report

- J. Shemanchuk presented the report and will submit a typed copy for the proceedings.

6.0 Promotion of Entomology

Does any one need the \$100/yr from ESC to promote entomology?
M. Dolinski has been approached about sources of information for schools; he will work with the schools where possible.

7.0 Committee Reports

7.1 Achievement Awards Committee

- if any send, it to M. Dolinski

7.2 Membership Report

R. Butts reported that there were 110 ordinary members, 5 Honorary members and 3 Library members.

7.3 Joint Meeting

B. Charnetski gave report

Delete the financial statement in the proceedings for 1981.

The true one will be placed in the 1982 proceedings.

The breakdown was examined by an auditor.

B. Charnetski thanked the society and his committee members.

7.4 Environmental Council of Alberta - J. Shemanchuk

Meeting December 9, 10, and 11 in Medicine Hat Theme "Dollar & Sense in Water Management".

John Weibe, AHRC will speak at this meeting

Hall report

- the ECA has submitted a statement

- supported the maintenance of registration in Agriculture.

- a full report is included in the proceedings.

7.5 Nominations Committee - M. Dolinski, B. Taylor, R. Butts

President - Bruce Taylor

Vice-President - Marilyn Steiner

Past-President - M. Dolinski

Sec-Tres - R. Butts

Editor - B. Charnetski

Regional Directors - J. Shemanchuk

Directors - B. Nelson

- R. Holmberg

- G. Pritchard

Auditor - J. Spence

- B. Mitchell

Resolutions Committee - H. Philip

- R. Gooding

D. Craig moved nominations cease, seconded by M. Steiner, Carried

G. Ball moved acceptance of nomination slate. Seconded by G.

Griffiths. Carried

7.6 Insect Collection Competition

C. Hergert presented the list of winners. C. Hergert has a prepared judging sheet for the executive to consider for use as guidelines. J. Shemanchuk moved that this and the list be considered by executive. Seconded by H. Philip. Carried. M. Dolinski said the prize for 1, 2, and 3 had been set by tradition and would be awarded accordingly. C. Hergert motioned that the report be accepted. Seconded by R. Gooding. Carried.

8.0 New Business

8.1 Membership fee change

Bill Nelson thought \$4.00 is too cheap. Moved it be \$5.00.
Seconded by R. Holmberg.

Discussion

G. Ball suggested that we had no real reason to raise it.
Defeated.

8.2 Funds transferred from ECS-ESA joint meeting account

B. Charnetski moved that the funds be transferred as of November 1, 1982. Seconded by D. Craig. Carried.

8.3 Recommendation by Joint Committee Chairman to ESA.

- 1) Donation of \$1500.00 to the ESC scholarship Fund. J. Shemanchuk moved that this be done. Seconded by A. Schaaf. Carried
- 2) An Honorarium should be awarded to the accountant who did the books for the joint meeting. B. Taylor moved that an Honorarium be awarded (up to the value of \$150.00) and B. Charnetski will decide what to do with the funds. Seconded by G. Ball.
- 3) That the joint meeting committee be disbanded - ESA disbanded the committee.
- 4) Mike suggested that we should give one prize of \$250.00 or \$300.00 and name it after someone (e.g. Brian Hocking Award) - G. Ball was concerned about the mechanics of doing this. J. Shemanchuk motioned that: The executive appoint a committee to review the ESA prize with view of increasing it and determining the mechanics of how to award it. The decision will be ratified next year. Seconded by G. Ball. Carried.

9.0 1983 Meeting

D. Craig moved that the next meeting be a joint meeting with B. C. Entomology Society. Seconded by G. Ball. Carried. R. Holmberg moved that if we can not meet with B.C., we will meet with the Plant Pathology Society of Alberta at Brooks. Seconded by R. Gooding. Carried.

10.0 Other Business

- 10.1 G. Ball suggested that members at meeting should have name tags.
- 10.2 G. Ball suggested Zoological Record donations should be allocated, however, we found out no donations were needed.
- 10.3 C. Hergert suggested that fewer mail outs were needed - two instead of four. M. Dolinski agreed.

The meeting adjourned at 4:45 p.m. on a motion by H. Philip, seconded by G. Ball.

ENTOMOLOGICAL SOCIETY OF ALBERTA

Financial Statement for 1982

Receipts

	<u>Sub Totals</u>	<u>Totals</u>
Bank Balance held in Vegreville Acct. Jan. 1, 1982	\$1,666.14	
Petty cash	<u>8.07</u>	
		\$1,674.21
Membership sales:		
1979 - 1 at \$4.00	\$ 4.00	
1980 - 3 at \$4.00	12.00	
1981 - 15 at \$4.00	60.00	
1982 - 45 at \$4.00	180.00	
1983 - 53 at \$4.00	212.00	
1984 - 1 at \$4.00	<u>4.00</u>	
		\$ 472.00
Bank interest: April 30, 1982		23.98
ESA annual meeting: Registration - 58 at \$3.00	174.00	
- 37 at \$7.00	<u>259.00</u>	
		\$ 433.00
Sale of insect boxes through University of Alberta, 1981		\$ 263.20
U. S. exchange credit		.88
Funds from the joint ESA ESC meeting		<u>\$6,155.50</u>
Total receipts for 1982		<u>\$9,022.77</u>

Disbursements:

ESA Annual Meeting 1982

General Supplies	17.97
	4.76
	12.69
Cheese	81.82
Wine	85.20
Liquor license	23.10
Coffe & Donuts	90.42
Honorarium - T. S. Bakshi	<u>100.00</u>

\$ 415.96

ESA ESC joint meeting committee luncheon	89.00
Insect collection prize 1981	25.60
Insect collection prize 1982	30.00
Allocation to H. Philip for income tax resulting from bonds	500.00
University of Alberta Student Prize	50.00
Stamps	40.05
	<u>10.20</u>

\$ 50.25

NSF cheque	<u>9.25</u>
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Total Disbursements for 1982 \$1,170.06

BALANCE SUMMARY

Total receipts	\$9,022.77
Total disbursements	<u>\$1,170.06</u>
Balance	\$7,852.71

Bank Balance Dec. 31, 1982

\$ 8026.16

Cheques deducted from wrong account at Fairview

181.52

Balance

\$7,844.64

Petty cash on hand

\$ 8.07

Final Balance

\$7,852.71

Prepared by:

Approved by ESA Auditors

Richard A. Butts

John R. Spence

Secretary Treasurer

B. K. Mitchell

ENTOMOLOGICAL SOCIETIES OF ALBERTA AND CANADA

NOTES TO FINANCIAL STATEMENT FOR JOINT MEETING

BANFF, ALBERTA

October 5-9, 1981

Accounting Policies:

Receipts and expenditures are recognized on the "cash basis" only.

Interest on the Canada Savings Bond has not been accrued and any interest from this bond has not been reported in the attached statement.

The bank balance, as reported on the statement, represents cash in the Canadian Imperial Bank of Commerce as of May 20, 1982.

ENTOMOLOGICAL SOCIETIES OF ALBERTA AND CANADA

STATEMENT OF RECEIPTS AND PAYMENTS FOR JOINT MEETING

BANFF, ALBERTA

October 5-9, 1981

	<u>BUDGETED</u>	<u>ACTUAL</u>
<u>RECEIPTS:</u>		
Registration		\$10,000.00
Grants, Donations		11,250.00
Displays - Booth Rentals		1,690.00
Other		
Bank Interest	424.63	
Banff Centre Allowance	\$ 1,318.40	
Barbeque - Banff Centre	966.40	
Miscellaneous	<u>67.65</u>	
		<u>2,777.08</u>
TOTAL RECEIPTS		\$25,717.08

<u>PAYMENTS</u>		
Scientific Programme	2,575.15	
Special Interest	232.00	
Social Events	12,241.46	
Ladies' Programme	308.50	
Accommodation and Reception	435.03	
Publicity	1,114.14	
Other	<u>516.33</u>	
TOTAL PAYMENTS		<u>17,422.61</u>
EXCESS RECEIPTS OVER PAYMENTS		<u>8,294.47</u>

Represented By:

Petty Cash on Hand	40.85
Cash in Bank	3,153.62
Canada Savings Bond	<u>5,100.00</u>
	<u>8,294.47</u>

DETAILED FINAL FINANCIAL STATEMENT

JOINT MEETING ENTOMOLOGICAL SOCIETIES OF ALBERTA AND CANADA
BANFF, ALBERTA
October 5-9, 1981

RECEIPTS

Registrations

Pre-registration (106 x 40.00)	\$ 4,240.00	
Late registration (39 x 50.00)	1,950.00	
Student/spouse (128 x 25.00)	3,200.00	
Day registration (36 x 10.00)	360.00	
Banquet (7 x 15.00)	105.00	
Barbeque (3 x 20.00)	60.00	
Wild game (1 x 10.00)	10.00	
Miscellaneous (1 x 30.00)	30.00	
(1 x 40.00)	45.00	
	<hr/>	
		\$10,000.00

Grants/Donations

Ent. Soc. of Canada	\$ 2,500.00	
University of Alberta	1,050.00	
Alberta Govt. Banquet Grant	2,500.00	
Alberta Environment	2,000.00	
Industry	3,200.00	
	<hr/>	
		11,250.00

Booths/Displays

Hoescht Chem	\$ 300.00	
Douglas Brown Micr.	300.00	
Leitz Optical	300.00	
Campbell Scientific	300.00	
American Optical	300.00	
Paul Parey Sc. Publ. (U.S.)	40.00	
Plenum Publ. (U.S.)	150.00	
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		1,690.00

Miscellaneous

Bank Interest (Nova Scotia)	264.85	
(Bank of Commerce)	18.68	
(Treasury Branch)	141.10	
U.S. Exchange Credit	53.65	
Xeroxing	14.00	
Banff Centre Function Allowance - Banquet	1,318.40	
- BBQ	966.40	
	<hr/>	
		2,777.08

TOTAL RECEIPTS

\$25,717.08

EXPENSES

Scientific Program

J. Borden (travel)	\$ 305.25	
(accommodation)	188.60	
F. McEwen (travel & accommodation)	587.90	
K. Kline (travel)	60.00	
(accommodation)	92.00	
C. Gillot (accommodation)	291.40	
Printing (program and abstracts)	<u>1,050.00</u>	
		\$ 2,575.15

Special Interest

Black flies (M. Chance)	\$ 119.79	
Photography (K. Sinclair)	52.40	
Bees (R. Schuel)	<u>59.81</u>	
		\$ 232.00

Social

Coffee & juice	\$ 593.75	
Donuts	325.50	
Banquet (206 x \$6.40)	1,318.40	
" (Surcharge)	1,065.40	
" (Cake)	87.50	
" (Wine)	323.40	
" (Flowers)	100.00	
" (Speaker)	300.00	
" (Program printing)	73.03	
Barbeque	4,648.00	
Wild game - Banff Centre	1,000.00	
" (Beer)	288.00	
" (Wine)	486.40	
" (Additional Wine)	108.65	
" (Sausage)	310.00	
Banff Centre gratuity	750.00	
Photography - Nelson (accommodation)	178.60	
(supplies)	26.70	
- Charnetski (supplies)	14.85	
Meeting Room Technician	62.50	
Hospitality Suite	<u>180.78</u>	
		\$12,241.46

Ladies Program

Luncheon	\$ 308.50	\$ 308.50
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Accommodation & Reception

Steno assistance	64.00
Office supplies	32.70

Name tags	43.33	
Refunds - Berte	25.00	
- Milton	40.00	
- Jemenski	40.00	
- Scudder	90.00	
- Laing	25.00	
- O'Neill	25.00	
- Craig	25.00	
- Howlander	25.00	
	<hr/>	\$ 453.03

Publicity

Announcement	\$ 534.10	
Program	59.68	
Program	161.87	
Stationery - Letterhead	171.99	
Stamps	169.50	
Stamps	17.00	
	<hr/>	\$ 1,114.14

Miscellaneous

Receipt book	\$ 4.22	
Receipt book	4.74	
Ticket rolls	10.50	
Committee expenses	23.45	
Telephone	64.67	
"	13.64	
"	5.61	
"	131.85	
"	15.91	
Bank service charge (Nova Scotia)	1.50	
(Commerce)	.20	
"	.40	
"	1.60	
"	2.60	
Non-receipted expenses	235.44	
	<hr/>	\$ 516.33

TOTAL EXPENSES		\$17,422.61
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BALANCE SUMMARY

Total receipts	\$ 25,717.08	
Total expenses	<u>17,422.61</u>	
		\$ 8,294.47
Petty cash on hand	40.85	
Bank balance	3,153.62	
Canada Savings Bond	<u>5,100.00</u>	
		\$ 8,294.47

REPORT OF THE REGIONAL DIRECTOR

As Regional Director, I attended the Entomological Society of Canada Governing Board Meetings on November 28 and 29, and December 3, 1982, held at the Royal York Hotel, Toronto, Ontario.

Annual Meeting

The Annual Meeting of the Entomological Society of Canada was held jointly with the Entomological Society of America and the Entomological Society of Ontario. About 2,000 delegates were present at the meeting with about 200 graduate students present. Eight hundred and ninety-one papers were presented. Special interest groups were held on three evenings on a wide range of entomological subjects.

Future Meetings

- 1983 - Entomological Society of Saskatchewan and the Entomological Society of Canada, Sheraton Hotel, Regina, October 1-5.
 - Theme: Integrated Pest Management.
- 1984 - Acadian Entomological Society and the Entomological Society of Canada, St. Andrews, New Brunswick, October 1-4, 1984.
- 1985 - Entomological Society of Canada will meet with Biological Council of Canada in June at the University of Western Ontario, London, Ontario. The representation at this meeting will be in a form of seminars to be arranged by Past-President Dr. Glen Wiggins. Other members of the Entomological Society of Canada are encouraged to attend this meeting. The Annual Meeting of the Entomological Society of Canada will be organized by the Executive of ESC with the location and time to be announced at a later date.

Finances

A deficit budget for the next year was approved. The finance committee was instructed to investigate ways to reduce expenses. One area to be explored is to reduce the cost of running governing board meetings.

Membership Fees

Regular membership fees were raised from \$35 and \$45 and the student fees were raised from \$10 to \$20 effective 1 January 1984.

Subscription price was raised for the Canadian Entomologist from \$70 to \$85, effective 1 January 1984. Back issue price for the Canadian Entomologist has been increased to \$70 per volume or \$7 per issue.

Page Charges

Page charges for printing in the Canadian Entomologist has been increased to \$75 per page, effective 1 July 1983. This charge will be in effect only if an NSERC Grant is not available. A reduction in page charges will be made proportionately to the amount of the NSERC Grant.

Scholarships

The principal of the Scholarship Fund now yields over \$3,000 per year. The Governing Board authorized awarding of two scholarships in 1983, the amount to be to the maximum allowable under the NSERC regulations.

Two hundred and seventy-five dollars has been donated to the Scholarship Fund in memory of Dr. J. McLintock, a Past-President of the Entomological Society of Canada.

Publications

Canadian Entomologist

- 252 papers were received
- 51 were published
- 83 accepted
- 24 rejected
- 37 under review
- 5 withdrawn
- 50 returned for revision
- 2 resubmitted after rejection

Dr. C. Cloutier has been named as Associate Editor of the Canadian Entomologist.

Dr. D. C. Eidt, Editor of the Canadian Entomologist, recommended that a committee be appointed to study the position of Scientific Editor with a possibility of having a paid Editor. The committee should bring in a report at the next Annual Meeting.

Bulletin Entomological Society of Canada

Dr. Helen Liu is Editor of the Bulletin. She has been granted permission to advance the deadline for submissions by two weeks.

Guest editorials, to commence with the December 1982 issue, have been solicited.

Committee for a Study of the Cost of Destructive Insects in Canada

The results from this study are dramatic and the cost-benefit figures for insect control in Canada on the crops chosen for the initial study will demonstrate that over the period 1960-1980 insect control on these crops

resulted in increased value in excess of a billion dollars. The Governing Board passed a motion to initiate the preparation of another proposal for submission to DSS to study crops with a different geographic impact.

Science Policy Committee

The following reports were submitted:

1. Entomology Research by Federal Government of Renewable Resources.
2. Review of Entomology Curricula in Canadian Universities.
3. Support of Entomological Research by Provincial Governments.

Employment Committee

The Employment Committee has been funded jointly by Agriculture Canada and Environment Canada to study employment requirements of entomologists in Canada.

Executive Council

The Executive Council for 1983 is composed of G. E. Ball, President; R. F. Morris, First Vice-President; Susan McIver, Second Vice-President; and G. B. Wiggins, Past-President.

Trustees

Trustees of the Society for 1983 are E. C. Becker, Treasurer; D. C. Eidt, Scientific Editor; C. A. Miller, Assistant Scientific Editor; H. Liu, Bulletin Editor; and H. G. Wylie, Secretary.

Awards

Gold Medal - Dr. Eugene Gordon Munroe
C. Gordon Hewit - Dr. Stephen Solomon Tobe

Fellowships

Dr. W. J. Turnock
Dr. H. V. Danks
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Dr. G. B. Wiggins
Mr. J. A. Shemanchuk

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Past President - Dr. G. B. Wiggins
President - Dr. G. E. Ball
First Vice-President - Dr. R. F. Morris
Second Vice-President - Dr. Susan McIver
Treasurer - Dr. E. C. Becker
Secretary - Dr. H. G. Wylie

Scholarship

Successful Scholarship Candidates:
Martha J. Farkas - University of Manitoba
Elizabeth Nielsen - Simon Fraser University

17th International Congress of Entomology

The 17th International Congress of Entomology will be held at Hamburg, Germany, August 20-26, 1984.

A handwritten signature in cursive script, reading "J. A. Shemanchuk". The signature is written in dark ink and is positioned above the printed name.

Submitted by: J. A. Shemanchuk

REPORT OF REPRESENTATIVE TO THE ENVIRONMENT COUNCIL OF ALBERTA

At the 11th Annual Joint Meeting of the Public Advisory Committee on Environment and the Environment Council of Alberta, I was elected Vice-Chairman of the Public Advisory Committee. As Vice-Chairman, I attended 10 meetings of the Coordinating Committee of the Public Advisory Committee of the Environment Council of Alberta. At three of these meetings, Mr. Cookson, Minister of Alberta Environment, was present to discuss amendments to the Clean Air Act, hazardous waste management, sewage disposal facility financing policy, sour gas plant emissions, and acid rain forming emissions.

As Vice-Chairman, I was responsible for organizing and conducting the 12th Annual Joint Meeting of the Public Advisory Committee on Environment and the Environment Council of Alberta. The theme of this meeting was "Water Management Makes Dollars and Sense". The formal presentations at this meeting were:-

1. Law in Environment Management
2. Water Diversion - Garrison Dam
3. Self-Sufficiency in Food Production in Alberta
4. Water Management and Use
5. Nature's Lifeline, Prairie and Northern Waters

The newly appointed Minister of Environment, Mr. Fred Bradley, was the speaker at the banquet. He addressed the gathering very briefly and then asked the audience to express their concerns about the environment that will require attention in the near future.

I also attended three Pollution Study Group meetings. The Pollution Study Group submitted resolutions to the Annual Meeting on the following subjects:

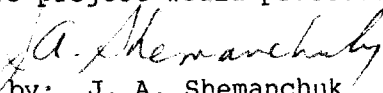
1. Community Sewage Treatment Grants
2. Desulphurization of Coke
3. Acid Forming Emissions Policy
4. Acid Forming Emissions Control
5. Administration of the Alberta Municipal Grant Program for Water Supply and Sewage Treatment

There were resolutions from other study groups for a total of 17.

The Environment Council of Alberta began the process to conduct public hearings into maintaining and expanding the agricultural land base in Alberta. To date, the panel for these hearings has not been appointed.

A firm in the name of Chem Security has been selected to construct and operate a facility for the management of hazardous wastes. To date, the location for this facility has not been selected.

During 1982, the Canada West Water Report, the Alberta Government Water Management Committee Report, and the Energy Resources Conservation Board Report Number 82-D were released. An announcement was made that work on the Slave River Hydro project would proceed.


Submitted by: J. A. Shemanchuk
ESA Representative

BY-LAWS
ENTOMOLOGICAL SOCIETY OF ALBERTA

Article 1

Title

This Society shall be known as the Entomological Society of Alberta in affiliation with the Entomological Society of Canada.

Article II

Object

The object of the Society shall be to foster the advancement, exchange, and dissemination of the knowledge of insects in relation to their importance in agriculture, horticulture, forestry, public health, industry and, for its own sake, among the people of the Province of Alberta.

Article III

Membership, Dues, and Expenditures

- a. Any person interested in entomology may become a Full Member by submitting a completed membership application form and membership fee payment to the Secretary of the Society.

Honorary Life Membership may be conferred on anyone who has performed long and distinguished service in the field of entomology. The total of Honorary Life Members shall not exceed five percent of the total membership at the time of election. An Honorary Life Member will enjoy all the rights and privileges of Full Members but will be exempt from payment of dues. All Full Members are entitled to propose the name of prospective Honorary Life Members provided each such proposal is supported by two other Full Members and documentation is submitted in writing to the Secretary at least one month prior to the Annual Meeting. Such Honorary Life Members will be elected at an Annual Meeting.

- b. A member may withdraw from the Society upon giving notice to the Secretary.
- c. An annual fee necessary for the operation of the Society shall be levied from each member as provided for in Section 1 of the Rules and Regulations.
- d. The Executive shall have power to meet expenses required in the normal operation of Society business. Such expenditures shall be subject to subsequent ratification at the Annual Meeting by the majority of the members present.

- e. A member who neglects to pay the annual fee for two consecutive years shall automatically cease to be a member.

Article IV

Meetings

Meetings may be called each year by the President at times and places suitable to the majority of the members. The fall meeting normally shall be considered the Annual Meeting and shall be held in the locality decided upon at the preceding Annual Meeting. One-quarter of the total paid-up membership shall constitute a quorum.

Article V

Officers

The Officers of the Society shall consist of a President, Vice-President, Secretary-Treasurer, and Editor. These officers shall constitute the Executive of the Society with full power to act on behalf of the Society within the bounds of the Rules and Regulations, and to appoint committees as necessary.

Article VI

Council

The Council shall consist of the four Officers, the immediate Past-President, a Regional Director to the Entomological Society of Canada, and three Ordinary Directors. The Ordinary Directors shall represent the various fields of entomology and the geographical areas of Alberta as widely as possible.

Article VII

Elections

Elections shall be held once a year at the Annual meeting, and Officers so elected shall take office at the beginning of the following calendar year and remain in office for a term of one year.

The office of President shall not formally be held by the same person for two consecutive years. The Vice-President shall normally follow his/her term of office with a term as President. The Secretary-Treasurer and Editor shall be eligible for immediate re-election.

The Directors shall also take office at the beginning of the calendar year following their election.

The Regional Director shall be elected for a period of two years and shall then be immediately re-eligible for one more term.

The term of office of each Ordinary Director shall be three years, with one Director replaced in each year. Ordinary Directors are not immediately eligible for re-election.

Article VIII

Vacancies

Vacancies in any office (except that of President) on the Council between elections shall be filled by appointment by the President, with the concurrence of Council, the tenure of such co-opted members to terminate at the end of the calendar year during which the appointment is made. A vacancy in the office of President shall be filled by the Vice-President who will then serve his normal term as President.

Members elected at the Annual Meeting to fill vacancies on Council shall complete the period of service of the Council members whose places they have taken. On completion of this term they shall be eligible for re-election only if their period of service (co-opted and/or elected) has not exceeded 18 months.

Article IX

Duties of Officers

The President shall preside at all meetings and act ex-officio on all committees.

The Vice-President shall, in the temporary absence or disability of the President, perform the duties and exercise the powers of the President, and shall perform such other duties as shall from time to time be imposed upon the Vice-President by the Council.

The Secretary-Treasurer shall maintain a record of all meetings and act as custodian of minute books and current correspondence, and forward appropriate material to the University of Alberta for storage in the Society's archives. This person shall also receive and disburse all funds and prepare the annual financial statement.

The Editor shall receive and record reports and publications on behalf of the Society and act as editor of the Proceedings.

Article X

Signing Officers

The two signing officers of the Society shall be the President and the Secretary-Treasurer.

Article XI

Alteration of the By-Laws

The By-Laws may be altered or amended at any Annual Meeting of the Society with the approving vote of three-fourths of the members present and in good standing. Such alterations must be made by notice of motion, which shall have been sent to the Secretary and a copy of such forwarded to all members at least two weeks before the Annual Meeting.

RULES AND REGULATIONS

1. a. The annual fee for full membership shall be \$4.00.
b. The fiscal year of the Society shall coincide with the calendar year; fees are payable in advance, at the time of the Annual Meeting.
 2. a. An interim financial statement shall be presented by the Secretary-Treasurer at the Annual Meeting and the final, year-end statement at the first general meeting following the end of the fiscal year.
b. Two auditors shall be appointed at each Annual Meeting to examine the accounts of the current year and the annual financial statement.
 3. Registration fees for student members of the Entomological Society of Canada attending the Entomological Society of Canada meetings shall be reduced when these meetings are held in Alberta with the Entomological Society of Alberta as host.
 4. The following standing committees shall exist to assist the ESA Council achieve the objectives of the Society:-
 - a. Achievement Awards Committee (to the ESC) - members: ESA Council.
 - b. Awards Committee (to the ESA) - members: three elected Society members.
 - c. Environment Council of Alberta - one ESA member shall be elected to represent the Society.
 - d. ESA-ESC Joint Meeting Committee - to be established a year preceeding any joint meeting of the Entomological Society of Canada and the Society; members to be selected from Society membership.
 - e. Insect Collection Competition Committee - members: one elected member plus two other members appointed by the elected member at each Annual Meeting of the Society.
 - f. Nomination Committee - members: the Past President, Vice-President, and one member in good standing shall prepare a nomination slate prior to each Annual Meeting and the Vice-President shall present the slate of nominated Executive Council members at the Annual Meeting.
 - g. Resolutions Committee - members: two Society members shall be appointed immediately preceding each Annual Meeting.
 - h. Science Fair Liaison Committee - members: one elected Society member; other members to be appointed as necessary by the elected member.
- All elections and appointments are not to exceed one year unless otherwise approved by the Society.
5. The Rules and Regulations may be changed by a motion approved by the majority of the members present at any general meeting.

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WANTED!



DEAD OR ALIVE

**Specimens of Solpugida (Arthropoda:
Arachnida) for Scientific Study**

Also known as: Sun-spiders and Wind-scorpions

Size: 2-3 centimetres (1 inch) as adults

Colour: Tan

Habitat: Dry regions of southern British Columbia, Alberta and Saskatchewan and, perhaps, Manitoba

Habits: Nocturnal predator; very fast and agile; found under rocks and "cow pies" but also in garages and other buildings

Other remarks: Non-poisonous but may attempt to bite; rare but previously collected in the southern Okanagan valley, and around Lethbridge, Medicine Hat and Swift Current; there may be up to six species (Kinds) in Canada; best preserved in 70 to 75% ethanol (grain alcohol), 60% isopropyl (rubbing) alcohol, or 4% formaldehyde (they shrivel too much if pinned like insects); if sent alive they should be packed with some moist paper towelling.

If you find this animal, please send it to: Dr. Robert G. Holmberg,
Athabasca University, 15015 - 123 Avenue, Edmonton, Alberta, T5V 1J7
Telephone: (403) 452-9990