Proceedings of the

Twenty-Second Annual Meeting

of the

ENTOMOLOGICAL SOCIETY

of

ALBERTA

October 3 - 5, 1974

Northern Forest Research Centre

Edmonton, Alberta

PROCEEDINGS OF THE 22ND ANNUAL MEETING OF THE ENTOMOLOGICAL SOCIETY OF ALBERTA

OCTOBER 3 - 5, 1974

NORTHERN FOREST RESEARCH CENTRE
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EDMONTON, ALBERTA

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SOCIAL AND BANQUET

L.K. Peterson
R.H. Gooding
H.F. Cerezke

The Entomological Society of Alberta acknowledges with thanks assistance from the Northern Forest Research Centre.

TABLE OF CONTENTS

Page

PRESIDENT'S REPORT

The honour of being your president for the year 1974 has been a rewarding and an interesting experience.

Although the work load was not heavy, it was a busy year with wide and diverse problems, activities and decisions as shown in executive and annual meeting minutes.

With the very fine support from the total executive, as well as the membership at large, most of the situations presented to the society were handled and disposed of satisfactorily for the purpose of our society.

The year was not one without sadness as five of our valued members have departed from our midst. Dr. Brian Hocking and Mr. George Hopping were past presidents of the Society. Mr. Hopping and Dr. Hod Seamans were honorary members. Bob Dixon and Dr. Robert Kasting have also contributed greatly to the success of our society.

These colleagues stimulated and generated energetic enthusiasm to a number of new colleagues, breaking into the complex technology of entomology.

It was a pleasure to have served as president of the Entomological Society of Alberta and I am now looking forward to assisting wherever my services may be required by the new executive and each succeeding one.

Lloyd Peterson

PROGRAM SYNOPSIS

THURSDAY EVENING

7:30	Registration
	Wine and Cheese Social

FRIDAY

8:00	Registration continued
8:30	Welcome Address - Dr. G.T. Silver, Director, Northern Forest Research Centre, Canadian Forestry Service, Edmonton
8:40	Greetings from the national society - Dr. C.R. Harris, President, Entomological Society of Canada
8:50	*"An Entomologist's view of mainland China"* - a slide presentation by Dr. C.R. Harris
10:15-NOON	Symposium
	"Insect Surveys"
1:30-3:00	Submitted Papers
3:20-5:00	Business Meeting

FRIDAY EVENING

6:00	Cocktails	
7:00	Banquet	GUEST SPEAKER
		Mr. Alex Mair Canadian Broadcasting Corp. Edmonton

SATURDAY

9:00-11:10	Submitted Papers
11:10	Business Meeting, continued

THE STATUS OF ENTOMOLOGY IN CANADA TODAY

C.R. Harris
President, Entomological Society of Canada

A considerable number of years ago it was always a pleasure for me, when I was working in Alberta, to be able to attend the annual meeting of the Entomological Society of Alberta. However, since moving to eastern Canada, the opportunity to attend your annual meetings has not often presented itself and thus it is with real pleasure that I find myself this year in the position of being able not only to attend your annual meeting but also to bring you the greetings of the national society and its good wishes for a very successful meeting.

I suppose that as President of the Entomological Society of Canada I should utilize my time here by putting in a plug for membership in the national society, or by attempting to justify increases in publishing costs in *The Canadian Entomologist* or the small increase in membership fees in the coming year, or perhaps even to try and convince at least some of you that *The Canadian Entomologist* is not just a "systematists' paradise" but actually does accept papers in other entomological fields. I don't intend to do this. Rather I would like to talk to you in the time allocated to me about a much broader problem which concerns me and I hope all of you, i.e. the status of entomology in Canada today.

The importance of insects in our ecosystem is often underestimated. Many species are beneficial. Some, of course, are pests and Canada certainly has its share of those. Although the fact is not often recognized insect pests can exert major limiting influences on the development of many sectors of our economy. One needs only to mention such major pests as grasshopper, biting flies, and the spruce budworm to illustrate the point. The tremendous importance of insect problems in relation to our economy has, in the past, been recognized by those in authority and for many years entomological research, extension, and education were strongly supported, and Canadian entomologists provided results without which our high productivity in agriculture and forestry today would never have been accomplished. And as the development of northern Canada continues, Canadian entomologists will be again called on to play significant roles in environmental impact studies, and on biting-fly control.

Considering its record of productivity, one would think that strong support of entomological programs in Canada would be continuing. However, such is not the case and entomology is receiving less and less support as time goes on. Entomologists are not alone. Science in general is in disrepute with both the public and those who control the purse strings. For several years scientific research in this country has been subjected to investigations, reorganizations, more investigations, and more reorganizations usually by people who have little concept as to what science is really all about. New advisory bodies have been established, new government departments have been created to administer scientific research, new fund granting councils are being created and so on and, as the cost of administering scientific research soars, research budgets have

been restricted to the point of little or no actual growth if inflation is taken into consideration. This is one instance where the old saying that there are "too many chiefs and not enough Indians" has real application.

A very high percentage of scientific research in this country is done within government departments. I am not going to engage in an argument as to whether or not this approach is justified. My point here is that when policy decisions to restrict scientific research budgets are made, it then falls on those departments carrying research programs to curtail or reduce them. The entomological research component is very strong in some government departments and perhaps for this reason it has been fair game for administrators forced to cut expenditures while straining to maintain a balanced overall research program. Being quite honest about it, I think that many entomologists will agree that some selective cuts in entomological research programs were justified relative to other research programs. However, I submit to you that in recent years the situation has gotten entirely out of hand. In the Canada Department of Agriculture, for example, where the strongest entomological research component exists, the average age of entomologists is in the mid 50's and as entomologists retire they are virtually all being replaced with scientists in other disciplines assigned a higher priority. The argument, of course, can be made that not all research should be done by government agencies and this indeed may be the case. However, the agricultural chemical industry in this country is hardly in a position to carry out extensive research programs of the kind required in entomology. With few exceptions, provincial agencies show little sign of assuming any further responsibilities and Universities, with only a limited number of jobs available to students on graduation, are certainly not being encouraged to expand their emphasis on entomological training and research. One only needs to look at the insect pest problems in this country, at the average age of our entomologists, and at the total number of entomologists left to realize that unless some drastic steps are taken to relieve the manpower situation in the near future, our capability for research on insect control is going to be drastically impaired.

What can we as entomologists do about the situation? One approach would be to sit by complacently anticipating our early retirement. A second approach would involve a little wishful thinking: thirking, for example, of how appropriate it would be for our science policy makers to get their tail-ends so thoroughly bitten by biting flies when they visit northern Canada that they would at least understand the significance of this one entomological problem. But even if such a notable event did occur it would only result in an unbalanced entomological program with greatly expanded emphasis on the one problem at the expense of others.

A third approach would be to campaign for reassessment of present policies toward entomological research in Canada and for development of some moderate, realistic long-term goals. Certainly this would seem to be the most logical approach. However, as I mentioned earlier any hopes of accomplishing this goal on an individual basis are long gone in this era of bureaucratic decision making. Only by organization will we be able to make ourselves heard.

Entomologists are not the only scientists in Canada who face a dim future. Others are in a similar position and some tentative steps have been taken toward organizing scientific advisory bodies which can influence policy decisions concerning science. Such bodies as the Biological Council of Canada and SCITEC are examples and the Entomological Society of Canada has supported them since their inception. No doubt these advisory bodies will, in time, serve a useful function in helping to establish guidelines for overall science policy in Canada. However, I suggest we are deluding ourselves if we think that they will be able to protect our specific interests. That responsibility rests with us.

Our entomological societies have always been inward looking. We have had good annual meetings. We have published papers in good scientific journals and we have felt that the results of our work were obvious for all to see and justified strong support. Now the situation is different and support for entomology is rapidly going downhill. Perhaps it is time that our societies, both regional and national became much more active in identifying priorities and in actively lobbying for their acceptance.

It is rather astonishing when one looks at our various scientific societies in Canada and realizes how little actual influence they have. In the case of the Entomological Society of Canada, for instance, we do not have official representation on such influential committees as the Canada Committee on Pesticide Use in Agriculture, the Canada Committee on Biting Flies, or the NRC Associate Committee on Environmental Criteria which includes a subcommittee on pesticides. Nor do we have official representation on NRC granting committees. At the provincial level where there is an Environmental Council or a Pesticide Advisory Committee, do any of the Provincial Entomological Societies have official representation?

We are equally poorly prepared when we talk about the future shortage of trained entomologists in this country as I have done today, because, for lack of statistics on manpower, we are forced to generalize. Nor do we have an adequate inventory of entomological research programs so that we can establish research priorities. Until we obtain such data, we are in a very difficult position when it comes to speaking out.

Assuming that we did have such information, we must also accept the fact that we do not have an eager audience of policy makers impatiently waiting to carry out our recommendations. In the present competitive atmosphere for research dollars, we would have to actively lobby for our priorities and programs - a step which many scientists find repugnant.

We are really faced with a choice. We can sit idly by watching support for entomological programs slowly disappearing or we can actively fight for a reassessment of the present policies toward entomological research and development of some realistic long-term goals. Entomology in Canada today is at a very important crossroad. Actions which we do or do not take could have much to do with the path it follows.

THE USES OF INSECT SURVEY

R.D. Dixon
Alberta Department of Agriculture, Edmonton, Alberta

My terms of reference for this topic are to present to this meeting how Alberta Agriculture uses information gleaned from insect surveys as well as to outline some of the problems encountered with sampling methods used in these surveys. However before I proceed with this objective I would like at this time to bring to your attention the responsibilities of Alberta Agriculture entomologists. I have taken it upon myself to speak for the group rather than the individuals since we work as a problem-solving team.

The Crop Protection and Pest Control Branch under the leadership of Mr. J. Gurba has the responsibility of diagnosing, designing and recommending methods of crop protection and pest control to some 63,000 farmers. This Branch must protect from insects through one means or another roughly 18 million acres of field crops, 40,000 acres of specialty crops, 1,500 acres of nursery crops, 72 acres of greenhouse crops, plus the protection of approximately 6 million head of livestock from external and internal parasites.

It is very obvious that we cannot do this job without help, and consequently we require a great deal of cooperation. This we receive through a variety of agencies such as C.D.A., Fish & Wildlife, Environment, and U. of A., to name a few.

At this point I would like to come back to the topic and bring up as examples some of the uses of surveys we are currently involved in.

At the last meeting of the Entomological Society of Canada in one of the Special Interest Groups, surveying was defined as a method used to examine biological organisms. However, we do not stop at the examination point but proceed to use this information to make recommendations for insect control. Using bertha armyworm as an example we have set up a series of surveys. These are as follows:

(1) A fall survey of bertha armyworm pupae. This forms the basis for predicting potential outbreaks for the forthcoming year and areas within the province where the potential outbreaks may occur. At this stage we prepare a forecast map. From this map the department can proceed to order control agents and the grower can make a tentative decision as to whether or not he should grow rape the following season.

(2) A spring pupal survey is done as soon as the ground is dry enough for digging. This allows us to check overwintering pupal mortality as well as to spot any significant changes in pupal numbers from the previous survey. At this time we update our prediction map.

(3) An adult bertha armyworm survey is undertaken using a network of blacklight insect traps. We have 13 traps with 5 more planned for inclusion in the 1975 program. These traps are located throughout the province as far north as Fort Vermilion and as far south as Medicine Hat. This survey gives us time and duration of emergence, and an indication of the abundance and distribution of the adult populations. Using this data we are in a position to say there will or will not be a problem. This survey also assists us in determining the timing of our next survey.

(4) The early instar larval survey begins as soon as the majority of adult moth activity is ending as indicated by our light traps. From this survey we learn where the major boundaries of the problem are, where infestations will be the heaviest and in what areas of the province we will have to institute control programs. At this stage we prepare and distribute the final forecast map. This gives the growers approximately fourteen days advance notice of a problem.

GRASSHOPPER SURVEY

This is a cooperative effort between Alberta Agriculture and Canada Agriculture. This survey is jointly carried out by Agricultural Fieldmen and C.D.A. personnel. The data is collected in August and forwarded to the Lethbridge Research Station for analysis and preparation of a prediction map. This map forms the basis for decisions by our department as to how much chemical we will require to protect the following year's crops. Should this survey ever be terminated by the Federal government I am sure the farmers would demand that heads roll. As far as Alberta Agriculture is concerned this survey has number one priority. I am not about to outline sampling problems here since I am not that closely associated with the survey techniques, however we do have experts in the audience who I am sure if asked will answer or describe these problems.

APHID AND LEAFHOPPER SURVEY

We have at Peers, Alberta an Elite I seed potato production isolation station. Surveys of aphid and leafhopper species, abundance and seasonal distribution are conducted by the Plant Industry Laboratory, Entomology section. Our purpose here is to monitor for aphids capable of carrying potato disease viruses, specifically Myzus persicae (Sulzer). We are also looking for leafhopper vectors of mycoplasma disease organisms. We do not want to institute chemical control unless it becomes absolutely necessary to ensure disease-free seed potatoes,which are produced and distributed to selected seed potato growers in Alberta.

CUTWORMS

In order to protect farmers from unexpected infestations of such cutworms as red-backed, pale western, early, and army, blacklight insect trap collections are carefully screened and the abundance of the adult moths recorded. When the number of adults reaches a particular level, warnings are issued to farmers in the region surrounding the trap(s) that a potential problem exists either for the current growing season or the following growing season (depends on the species of cutworm involved).

The blacklight trap network also monitors the immigration of lepidopterous pests from outside the province. Thus we are able to follow the distribution and any changes in the abundance of these potential new pests.

BITING FLIES

In cooperation with the Alberta Department of Environment, the diversity and distribution of mosquito species in Alberta has been recorded using the blacklight traps. This information however is not used as a basis for making predictions of potential mosquito problems.

During the summer of 1974 a massive research project was carried out to determine the feasibility of treating the Athabasca river with an insecticide for blackfly control. This was an integrated provincial-federal project involving such agencies as C.D.A. (Lethbridge and Saskatoon), Freshwater Institute (Winnipeg), and Alberta Agriculture and Environment. Pretreatment and posttreatment samples were made of the larval blackfly and the non-target organism populations in the river using various survey and sampling techniques in order to evaluate the effectiveness of the insecticide treatment against blackfly larvae, and to monitor the effect of the treatment on the river N.T.O.'s. This type of insect control research requires the cooperation of many agencies involving the sharing of manpower and equipment and the exchange of useful information.

FUTURE

I would like to mention that as techniques become more refined and we realize the value of surveys, perhaps in the future we will be looking at such things as the use of remote sensing, radar, heat sensing, and pheromone traps to mention a few.

In closing I would like to point out that we rely very heavily on insect surveys to help us to do our jobs. And in my opinion without them we would not be able to function properly.

The use of insect surveys to predict insect abundance is in my mind the most important part of crop protection and pest control.

OBSERVATIONS ON THE FEEDING HABITS OF *GRYLLOBLATTA CAMPODEIFORMIS* (GRYLLOBLATTODEA: GRYLLOBLATTIDAE)

P.J. Scholefield
University of Calgary, Calgary, Alberta

Adult grylloblattids in captivity were noted to lose weight when provided only with moss and fungus for food. Nymphs, however, were able to maintain constant weight. Subsequent feeding with *Drosophila* resulted in increased adult weight, and the method of capturing this prey was recorded on film.

Gut analysis of wild-caught specimens of *Grylloblatta campodeiformis* Wlk. showed a 90% content of arthropod parts. The main component of the food of specimens taken in September 1973 was the wingless crane-fly *Chionea obtusa* Byers. A motion picture film of the capture of *Chionea* was also presented.

FIELD AND LABORATORY OBSERVATIONS ON THE EGGS OF *AEDES VEXANS*.

M.A. Enfield
University of Calgary, Calgary, Alberta

In the spring of 1974, the number of eggs of *Aedes vexans* (Meigen) present in the dry bed of a temporary slough near Calgary was estimated from the number of larvae hatched from samples of soil and vegetation in the laboratory.

Most eggs hatched on the first warm-water (20-25^{o}) flooding, but 22% required subsequent drying and reflooding. The proportion of eggs hatching in the later floodings was greater towards the centre of the slough than in the outer areas.

The overall mean density of eggs was nearly 6000/m^2, but the local density varied from 68/m^2 at the centre, to over 16000/m^2 in a band towards the edge of the slough.

The estimated total number of eggs in the slough was about 4.3 million, of which 1.14 million were flooded after rain in August 1974. From the laboratory data, it was predicted that 780,000 eggs might be expected to have hatched in this flooding, and this figure agreed reasonably well with the number of newly-hatched larvae estimated to have been present in the slough.

FURTHER OBSERVATIONS OF THE EFFECT OF *TRYPANOSOMA MELOPHAGIUM* ON THE SHEEP KED, *MELOPHAGUS OVINUS*

W.A. Nelson
Agriculture Canada Research Station
Lethbridge, Alberta

The question of whether *Trypanosoma melophagium* is pathogenic to the sheep ked was investigated by histological examination of the posterior midgut. Peristalsis in the gut had ceased, except in the hindgut. Midgut epithelium was stripped off, leaving only the muscle layers. Many stripped-off epithelial cells were noted in the lumen, often surrounded by epimastigotes. There was often little or no digesta present in the lumen. The possibility that the prime cause of the above pathology is anoxia due to plugging of spiracles with debris, as shown by Watkins in *Rhodnius*, was discussed.

SYNTHETIC ATTRACTANTS AND THE CLOVER CUTWORM

D.L. Struble and G.E. Swailes
Agriculture Canada Research Station
Lethbridge, Alberta

There are two approaches to finding an insect attractant: one is by identifying the natural pheromone produced by the female insect, the second is by determining the attractancy of selected synthetic chemicals. The selection, synthesis, and field testing of selected synthetic chemicals were discussed. The results of field testing that led to the discovery of a highly specific attractant for the clover cutworm were presented.

SURVEY OF THE INVERTEBRATES OF TRUELOVE INLET ON DEVON ISLAND, NORTHWEST TERRITORIES

J.K. Ryan
University of Alberta, Edmonton, Alberta

The invertebrate species collected during four years of study at Truelove Inlet, 76^{0}N. lat. 85^{0}W. long., Northwest Territories are listed. Over 200 species representing eight phyla were collected. The most diverse primitive phyla were Protozoa, Nematoda and Annelida. Fourteen orders of Arthropoda were found. Diptera was the most diverse with Lepidoptera and Hymenoptera the most dominant leaf feeders. Trichoptera and Coleoptera were poorly represented. A preliminary collection of Phthiraptera disclosed the presence of five species.

WHEN IS A BLACKFLY NOT A BLACKFLY?

D.A. Craig
University of Alberta, Edmonton, Alberta

The two fossils of *Pseudosimulium humidum* (Brodie), 1845 have been further curated and are clearly not simuliids. Geological evidence on the Purbeck formation that was laid down in the Upper Jurassic also indicates that these fossils are not simuliids.

ELECTRONIC DATA PROCESSING AND INSECT SURVEYS

J. Bělíček
University of Alberta, Edmonton, Alberta

The need for a faunal catalogue is self evident. A catalogue of insects and arachnids of Alberta is proposed utilizing the storage/retrieval system of computers. The existence of such data banks are currently in use at the University of Alberta computing center, and the implementation of such a system is very feasible at the present time. Cost analysis conducted elsewhere indicate, that cost per record fluctuates between 50 and 60 cents, depending on record complexity and size. With an estimate of 30,000 species of insects and arachnids in Alberta, it is estimated that a sum of $15,000.00 will be needed for completion of the entire catalogue.

The versatility of a computer is exceedingly great. Easy updating and selective searching of data are the main advantages. Accessability to the computer by a terminal enhances the usefulness of the system, to anyone in Alberta.

SCHEME OF THE BUMBLE-BEE DISTRIBUTION MAPS IN BRITAIN

Andrew P. Nimmo
Provincial Museum and Archives of Alberta

The scheme dealing with the distribution of all species of *Bombus* (20) and *Psithyrus* (6) in the British Isles was discussed. Participants of the scheme were museums, institutions and the public. These were classed as Collectors or Recorders, the latter doing their own identification.

Several kinds of record cards were provided, including single locality (all species), single species, and habitat cards, etc. Each locality was specified as closely as possible, both verbally, and by reference to the U.K. Ordnance Survey grid system. The information was used in the computer mapping of each species.

The results to date are embodied in "Part three of the Provisional Atlas of Insects of the British Isles (Bumblebees)" published by the Biological Records Centre, and available from E.W. Classey Ltd., England. Mention was made of the possibility of using the Range, Township, and Section grid system in carrying out similar surveys in Alberta.

MOSQUITOES ATTACKING CATTLE AT GEORGE LAKE, ALBERTA IN 1974

J.E. Hudson
University of Alberta, Edmonton, Alberta

Twenty-seven collections of mosquitoes were made from cattle with an aspirator in the first hour after sunset between late April and early September. These collections yielded 15 species of *Aedes*, 3 *Culiseta*, and 1 each of *Anopheles* and *Coquillettidia*. The most abundant species were *Aedes vexans* (Meigen), *A. fitchii* (Felt and Young), *A. flavescens* (Müller), *A. spencerii spencerii* (Theobald) and *Culiseta inornata* (Williston). The highest estimate obtained was 1,106 bites per hour of which 770 were *Aedes vexans*. Due to weather conditions, behaviour of the cattle and limitations of a single collector, this estimate is considered too low. Three different traps tested (stable, New Jersey and dry ice baited) gave different results regarding numbers and species of mosquitoes.

SURVEYS OF TAXONOMIC DIVERSITY

G.E. Ball
University of Alberta, Edmonton, Alberta

These surveys are intended to provide an account of all species (of the group being considered) in the study area. The account is in the form of species lists, often with descriptions of taxa and keys, and with brief statements about geographical and ecological distribution. This type of survey may be of short or long duration. Such a survey is required for the insect fauna of Alberta, for the following reasons: first, general interest in the environment has made the public more aware of the organisms about them, resulting in an increased demand for presently unavailable information about our local fauna; second, those charged with conducting environmental impact studies require information about insect species that we cannot provide; third, the environment is being drastically altered by human endeavor, and this might lead to extinction of some species, and it is desirable to know about the latter before they have disappeared; fourth, we need to know more about the insect fauna because of the potential contributions to human welfare that the additional knowledge can make - discovery of potential crop pests, discovery of insects affecting health of people and livestock (either through disease transmission or allergic reactions), and discovery of additional species beneficial either for biological control or for studies of special aspects of biology (groups such as *Drosophila*, which have been of such great importance in genetics research).

On the basis of these considerations, the Provincial Government of Alberta should establish an Alberta Insect Survey, as part of the Provincial Museum. The Survey would be staffed by a Director, six qualified insect taxonomists, and necessary support staff. The major task of the professional staff would be to carry out a long-term survey of insects, to build a working (not display) collection, and to publish a series of monographs treating systematically the insect fauna. Additionally, the staff would undertake identifications for persons and other government agencies, as required. The Survey could serve as a focal point for study of the Albertan insect fauna, cooperating with the entomologists of the universities and at all levels of government, as well as with entomologists from the private sector.

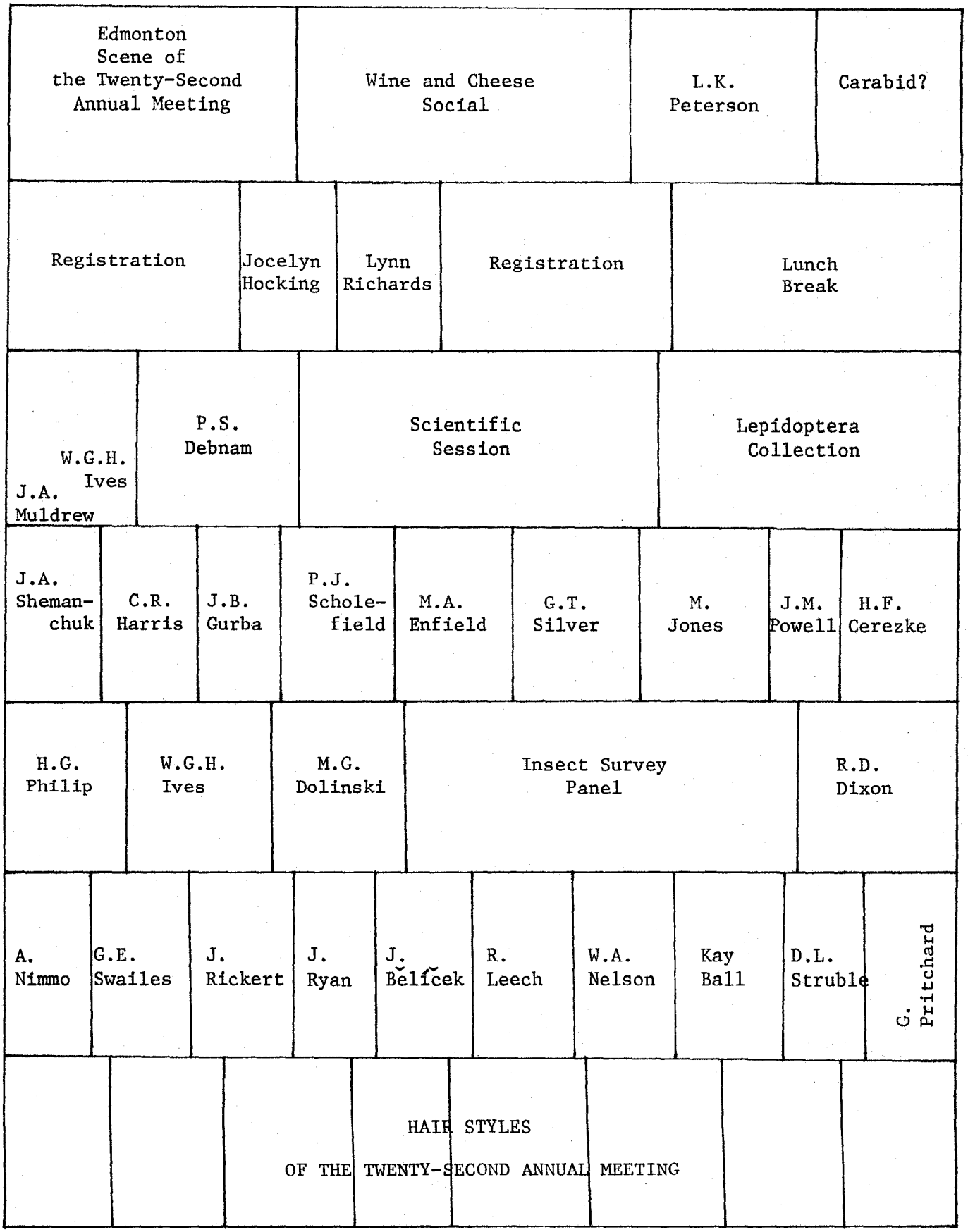
THE FOREST INSECT SURVEY

W.G.H. Ives
Northern Forest Research Centre, Edmonton, Alberta

A survey is conducted annually on a nation-wide basis to detect outbreaks or potential outbreaks of forest insects and to assess the damage caused by them. The difficulties encountered in identifying certain larval groups, which cause conspicuous defoliation require extensive reference collections plus rearing and cold room facilities to obtain adults for positive determination. Many insects are present in the field for relatively short periods of time and careful timing of surveys is required. The use of various survey methods such as sequential sampling, beating samples, visual ground and aerial observations will vary with the insect and the resources available. In some instances permanent sample plots are established and monitored on a year-to-year basis, but this is impractical for most insects because of the number of plots required. The sampling forms used in the survey are designed for computer input, and the information can be readily retrieved.

G.E. Ball	When is a blackfly ?	Lynn Richards	Janice Kuster	Art Borkent G.C.D. Griffiths — Jean Hollebone	The Goulets
C.R. Harris	Entomologist's view of mainland China	Grylloblatta campodeiformis	Observations on eggs of Aedes vexens	List of Mosquitoes attacking cattle at George Lake, Alberta	D.A. Craig
The Richards W.A. Charnetski	J.E. Hudson — H. Van Haga G.C.D. Griffiths G. Pritchard — G.E. Swailes N. Holmes	B. Mitchell G. Evans	J. Bělíček C.R. Harris	D.A. Craig K.R. Depner	H. Sladen — D. Pledger H.R. Wong
W.G.H. Ives — G.E. Ball	A. Nimmo — R. Leech R. Gooding B. Mitchell — J. Ryan		J.C.E. Melvin	J.B. Gurba	R.D. Dixon — L.K. Peterson
The Philips	G.E. Ball — B. Mitchell		Pat Stewart — B. Stewart Janette Peterson		A. Nimmo
Janette Peterson	Vi Cerezke	Ramona Gurba	Joan Evans	Chris Philips	Ruth Craig — Dolly Drouin — Mrs. Mair — The Richards
N.D. Holmes — G.E. Ball	The Wongs	A. Mair	A. Mair Janette Peterson — L.K. Peterson		The Dixons

ENTOMOLOGICAL SOCIETY OF ALBERTA


Edmonton Scene of the Twenty-Second Annual Meeting
Wine and Cheese Social
L.K. Peterson
Carabid?
Registration
Jocelyn Hocking
Lynn Richards
Registration
Lunch Break
W.G.H. Ives
J.A. Muldrew
P.S. Debnam
Scientific Session
Lepidoptera Collection
J.A. Sheman-chuk
C.R. Harris
J.B. Gurba
P.J. Schole-field
M.A. Enfield
G.T. Silver
M. Jones
J.M. Powell
H.F. Cerezke
H.G. Philip
W.G.H. Ives
M.G. Dolinski
Insect Survey Panel
R.D. Dixon
A. Nimmo
G.E. Swailes
J. Rickert
J. Ryan
J. Bělíček
R. Leech
W.A. Nelson
Kay Ball
D.L. Struble
G. Pritchard
HAIR STYLES
OF THE TWENTY-SECOND ANNUAL MEETING

TWENTY-SECOND ANNUAL MEETING - EDMONTON - 1974

MINUTES OF EXECUTIVE MEETING

May 22, 1974 - 2:00 p.m.

A meeting of Executive members of the Entomological Society of Alberta was held May 22, 1974 at the Northern Forest Research Centre, Edmonton, to discuss plans for the 22nd Annual Meeting, to assign committee heads and to establish a list of priorities for arrangements of the meeting. In attendance were L.K. Peterson, R. Gooding, H.G. Philip, W.A. Charnetski, H.R. Wong and H.F. Cerezke.

1) Date and Place of Annual Meeting-- The dates suggested for the Annual Meeting were October 4-5, 1974, to be held at the Northern Forest Research Centre, 5320-122 Street, Edmonton. (H. Cerezke to check on conference room reservations for these dates).

2) Program Committee-- Mr. H.G. Philip was assigned 1974 Program Committee Chairman. A number of themes for the meeting were suggested and discussed. However, the theme "Insect Surveys" was thought to be the most applicable in view of the wide range of interests and studies by ESA members. The possibility of inviting persons for informative presentations at the meeting who are or have been involved with special environmental studies in the Athabasca Tar Sands area (e.g. Syncrude Canada, Ltd., Environmental Affairs Group, G.C.O.S., Consultant Groups) was discussed.

   It was suggested that Mr. Philip solicit other members for his committee as required to take care of all program needs.

3) Registration-- Registration will be arranged by the Treasurer and take place on Thursday night, October 3, 1974 and also the following morning. It is planned that a Wine and Cheese Social be held at the same place as Thursday's registration - suggested locations are the Athabasca Hall and U of A Faculty Club. The latter was thought to be most suitable if available since arrangements would be less complicated. R. Gooding volunteered to check into the availability of the above places and make the necessary reservations.

4) Accommodation and Banquet-- The Executive decided that we deviate somewhat this year from the usual formal banquet and have a smorgasbord. A few places were suggested for contact on prices, facilities and availability, including Van Winkle Hotel and Catacombs Restaurant. The smorgasbord would have to be held Friday night, October 4th. It was estimated that up to 75 people would be present, including members, wives and guests.

   H. Cerezke was delegated to check out reservations, facilities and costs of holding the smorgasbord, and also on room costs for those wishing accommodation. The Van Winkle was suggested as a likely choice because of its convenient location for incoming members from the south and for ease of travel to the Northern Forest Research Centre.

5) Banquet Guest Speaker or Entertainment-- Several suggestions were put forth for after-dinner speaker/entertainment, but no final decisions were made. Alex Mair was suggested as one possibility. Mr. L. Peterson volunteered to check out this matter.

The meeting adjourned at 5:00 p.m.

Herbert Cerezke
Secretary-Treasurer

MINUTES OF EXECUTIVE MEETING

September 13, 1974 - 2:00 p.m.

A meeting of Executive and Special Committee members of the Entomological Society of Alberta was held September 13, 1974 at the Northern Forest Research Centre, Edmonton, to review and finalize plans for the 22nd Annual Meeting, October 3-5, 1974. In attendance were Mr. L.K. Peterson, Dr. Kay Ball, Dr. R. Gooding, Dr. H.R. Wong, Mr. D. Bruce Stewart and Dr. H.F. Cerezke.

1) Wine and Cheese Social-- R. Gooding reported that reservations had been arranged to hold the wine and cheese social at the Faculty Club, U. of A., to start at 8:00 p.m. October 3. A registration desk will be set up at the Faculty Club at 7:30 p.m. for early registrants. Drinks will be financed by the individual, and cheese, crackers, etc. to cost about $30.00 (included in registration fee). R. Gooding will look after collection of bills at the Faculty Club.

2) Conference Room and Coffee-- H. Cerezke reported that the conference room at the Northern Forest Research Centre had been arranged and will be free. Coffee for three coffee breaks will be provided courtesy of N.F.R.C.

3) Banquet, Guest Speaker and Honoured Guests-- H. Cerezke reported that reservations were made with the Van Winkle Hotel for a banquet smorgasbord, starting at 7:00 p.m. October 4. The banquet will be preceded by a cocktail hour; drinks will cost $.85 each or $1.10 for deluxe. Banquet costs were estimated at $5.75 per person. Final plans are to be completed a few days before the banquet for arrangement of head table, number of attendants and menu.

   L. Peterson reported that Mr. A. Mair, with C.B.C. radio, had accepted the invitation as after dinner speaker and will be accompanied by his wife.

   It was agreed by all that letters of invitation to attend the wine and cheese and banquet specifically be sent by the Secretary to Mrs. Jocelyn Hocking and the three Honorary Members, L. Jacobson, R. White and H. Seamans. L. Peterson agreed to enquire whether E. Gushel and his wife would be attending; their costs would be partly defrayed by the Society as in the past.

   Estimated banquet and honoraria costs for invited guests and banquet speaker were $120.25, to be absorbed by the Society.

4) Registration Fee-- On the basis of estimated costs in #3 above and for the Wine and Cheese Social, a registration fee of $3.00 was set. L. Peterson noted that M.P. Jones would assist at the registration desk October 3.

5) Alberta Ent. Soc. Student Prize-- Mr. Henry Frania, an entomology student at U. of A. was announced as the only prize recipient for 73-74. It was requested that the Secretary send Mr. Frania an invitation to attend the meeting.

6) Interim Financial Report and Present Membership-- The Treasurer noted that the bank balance as of August 29, 1974 was $1,931.18. Total membership was 85, including 25 - 1973 paid and 60 - 1974 paid members. Four new members joined the Society this year.

7) Reprints of 1973 Symposium at Banff-- The printing of the Symposium on "Systems Approach to Pest Management" at the 1973 joint ESC-ESA meeting in Banff was discussed. A supply of 100 reprints has been ordered through the Dept. of Ent. at U. of A. at a cost of $51.00. Discussion centered on whether the reprints should be sold or given free to members and also what requests for reprints the authors had made. R. Gooding agreed to enquire on author's requests with G. Ball and N. Holmes for a further report at the Business Meeting.

8) Committees-- Various committees for the business meeting were established as follows; first named is Chairman.

Nominations - A. Harper
- G. Pritchard
- Kay Ball

Resolutions - J. Shemanchuk
- D. Craig

Auditors - J. Muldrew
- J. Gurba

Insect Collection Competition - Same as last year.

It was noted that few, if any, collections will be forthcoming this year because of problems in sending out notices to the various schools. Further comments on this matter are expected at the general meeting.

9) Program-- Mr. B. Stewart presented a preliminary draft of the program from which a final draft was prepared. Final typing of the program was left with Mr. Stewart. The program is to be sent to all members prior to the meeting.

10) Final Executive Meeting-- It is planned that a short final Executive Meeting be held October 3 at the Faculty Club to decide and discuss topics of business for the general business meeting.

The meeting adjourned at 4:30 p.m.

Herbert F. Cerezke
Secretary-Treasurer, 1974

MINUTES OF EXECUTIVE MEETING

October 3, 1974 - 8:00 p.m.

An executive Meeting of the Entomological Society of Alberta was held at the Faculty Club, U of A campus on October 3, 1974. In attendance were Kay Ball, H.F. Cerezke, W. Charnetski, R.H. Gooding, L.K. Peterson, G. Pritchard, E. Swailes and H.R. Wong.

1) A draft copy of a certificate to be presented to recipients of the Entomological Society of Alberta Prize was displayed by B. Charnetski. The design and print were discussed, and it was concluded a redraft should be done to change the word Entomology to Entomological.

2) Payment for the sale of reprints of the Symposium held at the 1973 Ent. Soc. Canada meeting was discussed. It was pointed out by R. Gooding that no prior committment to the contributors was made for reprints on the part of Dr. G. Ball and Dr. N. Holmes. Therefore the ESA was committed to pay half the costs of publishing ($150.00) plus the cost of 100 reprints ($51.00), a total of $201.00.

3) Guests for the annual banquet of ESA were reviewed. It was agreed they include Mr. and Mrs. A. Mair and Mr. E. Gushul. B. Charnetski moved, G. Pritchard seconded that we also pay for Dr. R. Harris' banquet. Carried.

4) Committees for the annual meeting--

Nominations:	G. Pritchard (Chair.) E. Swailes (replacing A. Harper) Kay Ball
Resolutions:	J. Shemanchuk D. Craig
Auditors:	J. Muldrew J. Gurba
Insect Collections:	D. Craig chairman for 1974, and will choose others needed for his committee. It was reported that B. Godwin would be sending in collections from Olds.

5) Program-- It was noted that D. Rosenberg would not be attending the meeting and therefore would not be presenting his paper. It was agreed that Saturday morning's session commence at 9:00 a.m.

6) Several items of business were reviewed for inclusion on the agenda of the General Meeting. These included:

- a letter received from the Sec. of ESC, Dr. Davies
- a report by the Regional Director ESA, B. Charnetski
- re-appointment of B. Charnetski to publicize Ent. Soc. Alta. to E.S.C.
- announcement that A.G. Robinson is the new chairman of the committee for employment in entomology in Canada.

7) R. Gooding noted that members who have donated subscriptions of the Canadian Entomologist to foreign and needy libraries through ESC have not received acknowledgement that such material was received. It was suggested that B. Charnetski, ESA Regional Director, check this out. It was also suggested that the ESC Newsletter publish a list of needy libraries.

8) Proposed Biological Survey of Insects of Canada-- This proposed survey as outlined by J.A. Downes was briefly discussed as part of the report of the Reg. Director. B. Charnetski pointed out that this formal survey would proceed, providing they could get $2,000,000.00 for the project. The project is partly supported through the Biological Council of Canada to which ESC contributes in part $4,500.00 per year. B. Charnetski had suggested at the recent Board of Governors meeting, that ESC should consider withdrawing this support to BCC if the formal survey does not proceed. The topic was to be brought up at the general business meeting.

9) It was noted that Dr. Baker, who was an Honorary Member in E.S.C., died in August, 1974. This leaves a vacancy for nominating a replacement.

10) The question of whether E.S.C. should have representation on various pest control and pesticide committees was raised. R. Gooding pointed out that the most we can do is volunteer our expertise since we can hardly have delegates at all meetings. This topic was to be reviewed at the general meeting for concensus, at which time it was suggested that R. Gooding would present a motion.

11) B. Charnetski reported that ESC fees had been increased and that in 1975, only travel and not room and board, would be paid by ESC for Reg. Directors attendance at Annual Bd. of Gov. meetings. Further discussion on the payment of room and board of Reg. Dir. was set aside for the general meeting.

12) The topic of the preparation and presentation of a brief on Pesticide Use in Alberta to be presented on behalf of ESA was discussed. Mr. Peterson indicated he had previously suggested to A. Harper and B. Charnetski that they spearhead a brief. After some discussion it was decided that the topic be reviewed at the general meeting to determine:

(a) whether members were in favor of presenting such a brief to the Alberta Environmental Conservation Authority,

(b) whether the brief should be prepared by a committee, chaired by N. Holmes, and

(c) to ask N. Holmes to present his views.

R. Gooding moved the meeting be adjourned.

Herbert Cerezke
Secretary-Treasurer

MINUTES OF THE 22ND ANNUAL BUSINESS MEETING

Parts I and II

October 4-5, 1974

The 22nd annual meeting of the Entomological Society of Alberta was held in the Conference Room of the Northern Forest Research Centre, Edmonton, Alberta, October 4-5, 1974. The meeting was opened by the President, Mr. L.K. Peterson.

1) The minutes of the 21st annual meeting were adopted as published in the 1973 Proceedings on a motion by W.G. Evans, and seconded by H.G. Philip. Carried.

2) G.E. Ball suggested that a maximum of $150.00 be paid by ESA for cost of printing the Symposium held at the 1973 ESC meeting. The Secretary pointed out that this bill had been received and that the total cost to the Society would be $201.00 which included $150.00 for printing plus $51.00 for 100 reprints. It was agreed that a reprint be sent to each member with the 1974 Proceedings.

3) The persons named to serve on Nominations, Resolutions, Insect Collection Competition Committees and as Auditors (names given in Oct. 3, 1974 Exec. minutes) were listed. G.E. Ball moved, N.D. Holmes seconded that nominations cease. Carried.

4) D.A. Craig reported on the Insect Collection Competition and noted that the Dept. of Education had returned all notices of the competition. Other means of advertising the Competition were discussed and several suggestions were made including: advertise in newspapers in major centres, advertise through Boy Scouts, etc., contact individuals, provide notices in various natural history clubs such as Federation of Alberta Naturalists, advertise at Prov. Museum, entice retired members to work with science teachers (ie., personal contacts), set up displays in shopping centers, through interviews and nature talks on T.V. and radio.

5) G.E. Ball indicated he had no report on the Common Names Com.

6) H.F. Cerezke reported on the Membership Com., indicating there were about 95 members.

7) W.A. Charnetski reported that the Certificate for Ent. Soc. Alta. Prize would be reprinted and suggested a color change of the paper.

8) J. Bělíček moved, G.E. Ball seconded that we increase the ESA donation to the Zoological Record from $10.00 to $15.00. Carried.

9) The President announced the passing of two long-time members in the Society during 1974, Dr. B. Hocking and Mr. G.R. Hopping. He then asked the members to stand and observe a one minute silence. L.K. Peterson requested that their obituaries be included in the 1974 Proceedings.

10) Mr. Henry Frania, a student at the University of Alberta, Edmonton, was announced as this year's only recipient of the Entomological Society of Alberta Prize. A copy of the new certificate would be presented to him when printed.

11) The President noted for information that the passing of Mr. G.R. Hopping, who was an Honorary Member, left a vacancy. He suggested to members that they consider appointing a replacement in 1975.

12) The Regional Director, W.A. Charnetski presented his report which is to be included in the 1974 Proceedings. A point which received considerable discussion was the matter of R.D.s expenses while attending ESC Board of Governors' meeting. It was pointed out that only transportation costs of the R.D. were paid in 1974 and that the remaining costs of about $70.00 should be reimbursed by the Ent. Soc. of Alberta to W.A. Charnetski. C.R. Harris reviewed the financial straits ESC was in this year and noted that the Board of Governors had made the decision on their own to pay only transportation costs.
G. Pritchard moved, Kay Ball seconded that ESA subsidize in 1975, reasonable expenses (not including transportation) of the Regional Director to attend Board of Governors' meetings of ESC. Carried.

13) The President reviewed a letter from D.M. Davies, Secretary of ESC, which contained several points of interest to ESA members. The Secretary was instructed to send a letter to D.M. Davies, indicating that D.A. Craig, U of A, is now Chairman of the Committee of Student Encouragement. The letter noted that A.G. Robinson at Winnipeg is now Chairman of the ESC Employment Committee, and that students seeking employment should contact him directly. W.A. Charnetski was designated the person for publicising entomology.

14) Correspondence from I.W. Varty was reviewed, dealing with guidelines of future ESC annual meetings. C.R. Harris pointed out that Varty's report was not complete and that when complete, he would report to the regional societies. No action was taken at this time; L.K. Peterson suggested that new information forthcoming from I.W. Varty would give direction to the new Executive to act upon.

15) G. Pritchard as chairman of the Nominations Committee, reviewed some of the problems of appointing a new Executive, especially when the meeting place is in Calgary where entomologists are few in number. It was suggested that meetings be held only in Lethbridge or Edmonton. However, R. Gooding moved, J.A. Shemanchuk seconded that G. Pritchard direct the nominating committee to select the Executive for 1975 and 1976 from Lethbridge. The motion was defeated. Further discussion suggested that a motion should be made to improve the possibility of holding meetings in Calgary or Kananaskis.

16) H.F. Cerezke presented an interim Treasurer's report, indicating that the current bank balance was $2,547.68. Known expenses and bills at this time total about $735.00.

17) G. Pritchard moved, W.A. Charnetski seconded that nominations cease for the following slate of officers for the 1975 Executive. Carried.

President	- A.M. Harper	
Vice-Pres.	- W.A. Nelson	
Sec. Treas.	- H.F. Cerezke	
Editor	- H.R. Wong	
Directors:	- G. Pritchard (Calgary)	- to serve 1 yr.
	R. Gooding (Edmonton)	- to serve 2 yrs.
	K.R. Depner (Lethbridge)	- to serve 3 yrs.
Reg. Director	- W.A. Charnetski	

18) J.A. Shemanchuk presented the report of the Resolutions Committee-. Whereas the success of the 22nd Annual Meeting of the Entomological Society of Alberta can, to a large extent, be attributed to the following, be it resolved that letters of appreciation be sent to:

1) Mr. Alec Mair, for his very entertaining after dinner talk,
2) to Dr. C.R. Harris, President of ESC for his illustrated talk on his trip to China and for his participation in the meeting,
3) the Director, G.T. Silver, of the Northern Forest Research Centre for providing accomodation to hold the meeting,
4) the Faculty Club, U of A, for providing the facilities for the Thursday night reception,
5) the Van Winkle Hotel for providing banquet facilities and services and,
6) Mr. E.T. Gushul, who took leave to come to the meetings to take the traditional pictures which are part of the Proceedings.

Be it further resolved that a vote of thanks be tendered to the Executive and Committees who were involved in the preparation of the meeting and program.

J.A. Shemanchuk moved, D.A. Craig seconded that the report be adopted as read. Carried.

19) Environment Conservation Authority hearings on Biocide use in Alberta. L.K. Peterson introduced the subject, suggesting that E.S.A. should submit a brief. He noted that eight reports were available to the public which provide background information for preparation of briefs. It was noted that N.D. Holmes had begun preparing a brief on insecticide use in Alberta, and would present his brief regardless of E.S.A. involvement. N.D. Holmes briefly reviewed his outline of the proposed brief, indicating its main purpose was to present accurate scientific information. The general feeling was that E.S.A. should present a brief and the discussion which followed centered around how the brief could be prepared by October 30 and reflect adequately the views of society members. A series of motions were put forward to fulfill this objective.

G.E. Ball moved, H.G. Philip seconded that E.S.A. present a brief on insecticides to the Environment Conservation Authority. Carried. W.G. Evans stated he wished to be recorded as a dissenter. W.A. Charnetski then moved, J. Bělíček seconded that E.S.A. form an ad hoc committee with N.D. Holmes as Chairman who would prepare a brief on insecticide use in Alberta and present it to the Environment Conservation Authority. Carried.
A final motion moved by J.B. Gurba, seconded by G.E. Ball, was that an ad hoc Committee be made up and include the complete existing E.S.A. Executive (including Past-President) with N.D. Holmes as Chairman, that N.D. Holmes prepare and circulate copies of the brief to Executive members for review and comments within two weeks, and that members signify by show of hands their approval of N.D. Holmes preparing, representing E.S.A. and presenting the brief to the Environment Conservation Authority. Carried.

20) G.E. Swailes moved, N.D. Holmes, seconded that the 23rd Annual Meeting be held in Lethbridge. Carried.
G.E. Swailes noted that any constitutional changes were not appropriate at this time.

21) W.A. Charnetski informed the members that a science policy was being formulated by the Ent. Soc. Canada to advise on needs of special entomology projects, to seek financial needs and to advise on entomological matters. W.A. Charnetski moved, R. Gooding seconded that the report prepared by the National Society on a suggested science policy be reviewed by the incoming E.S.A. Executive to see where we fit into their terms of reference for possible input. Carried.

22) W.A. Charnetski asked members for views, for the next Board of Governors meeting with regard to payment of E.S.C. and E.S.A. fees. G. Pritchard moved, G.C.D. Griffiths seconded, that we re-affirm our arrangement of fee collection as stated in the 1973 Proceedings. Carried.

23) D.A. Craig reported for the Insect Collection Competition Committee. He noted that one collection did not arrive and that his Committee would examine these when they arrived and inform recipients and prepare a report for the 1974 Proceedings.

24) A proposed study to undertake an insect survey of Alberta was outlined by G.E. Ball. Obtaining funds to conduct such a survey was considered a major problem and some suggestions were made. However, at this stage of the proposal, support in principle was sought from the members. G.E. Ball moved, H.R. Wong seconded, that members of the Entomological Society of Alberta endorse in principle the establishment of an Insect Survey of Alberta, and that this endorsement be conveyed to the Minister of Culture, Youth and Recreation, the Hon. Horst Schmit. Carried. This Provincial Department was chosen since the Alberta Museum and Archives falls under its jurisdiction.
The Provincial Museum was indicated to have major involvement for storage and display of the insect material should the survey proceed.

25) J.B. Gurba moved a vote of thanks to the outgoing Executive.

26) R. Gooding moved the meeting adjourn, seconded by H.G. Philip. Carried.

H.F. Cerezke
Secretary-Treasurer, 1974

FINANCIAL STATEMENT 1974

Receipts		Subtotals	Totals
Bank balance transferred from Lethbridge		$2,181.55	
Petty cash transferred from Lethbridge		6.37	
Cheque from F.W. Faxon transferred from Lethbridge		7.72	
Total transferred from Lethbridge			$2,195.64
Membership fees:	1973 2 @ 2.00	4.00	
	1974 42 @ 4.00	168.00	
	1975 37 1/2 @ 4.00	150.00	322.00
Bank interest:	April 30	10.25	
	October 31	29.12	39.37
Annual meeting:	Registrations 43 @ 3.00	129.00	
	Dinner tickers 55 @ 5.75	316.25	445.25
Sale of Proceeding to A.R. Mann and Colorado Libraries		3.99	3.99
Total receipts for 1974			3,006.25
Credit held for F.W. Faxon for 1974 Proceedings			5.72
Total Entom. Soc. Alberta funds			3,000.53

Disbursements			
Entomological Soc. Alta. Prize, Univ. of Alberta			50.00
1973 ESC-ESA meeting notices printing costs			61.35
Printing and purchase of 100 reprints ESC-ESA Symposium			201.00
Annual meeting:	- Wine and Cheese	20.00	
	- Banquet	316.25	
	- Honorarium to guest speaker	50.00	
	- Expense and photography to E. Gushul	35.00	421.25
Insect Collection Competition Prizes:			
1973 purchased by H. Goulet		67.25	
1974 purchased by D. Craig		35.76	103.01
Printing 1973 ESA Proceedings			147.74

Disbursements (cont'd)	Subtotals	Totals
Framed photo for Mrs. B. Hocking		8.00
Stamps to send out annual meeting notices and 1973 Proceedings		20.48
Stamps for Editor and President		6.00
Stamps and miscellaneous expenses		16.73
Petty cash on hand		9.58
Total disbursements		$1,045.14
Total Receipts	$3,006.25	
Total Disbursements	1,045.14	
Bank balance	1,951.53	
Credit held for F.W. Faxon	5.72	
Total Ent. Soc. Alta. funds held in bank	1,945.81	
Petty cash on hand	9.58	
Total Ent. Soc. Alta. cash in Treasury Dec. 30, 1974		1,955.39
Loan of Insect Collection Competition Committee		561.33
Value of Insect collection boxes held by Insect Coll. Comp. Com.		561.33

H.F. Cerezke
Secretary-Treasurer

Approved by ESA Auditors:-

J.A. Muldrew
J.B. Gurba

REPORT OF THE REGIONAL DIRECTOR

The regional director attended two meetings of the Governing Board of the Entomological Society of Canada; one at McDonald College at Ste. Anne de Bellevue, February 19-21, 1974, and another at Dalhousie University in Halifax, August 25-26, 1974. Actions taken have been published in the bulletin of the Society, Volume 6(1): 8 (March, 1974), and Volume 6(3): 80 and 6(3): 82 (September, 1974). Although the bulletin is available to members of the ESA, there are a few points which should be emphasized.

Finance. -- The Entomological Society of Canada is undergoing exciting and new developments. However, economic and monetary conditions have resulted in the following considerations:-

a) The ESC fees will be increased by $2.

b) Members of the Governing Board will not be able to recover expenses for room and board incurred while attending any board meetings in 1975.

Canadian Entomologist. -- Page charges for publication in The Canadian Entomologist have been increased to $47. However, a proposal has been submitted to NRC for a grant to cover the page charges for those ESC members (especially those associated with universities) unable to pay the page charges.

Headquarters Building. -- The Governing Board has approved the expenditure of a sum not to exceed $150,000 for the purchase of a commercial building in Ottawa to house the Society's head office. The remaining portion (it is hoped the bulk) will be rented out for additional revenue.

Honorary Members. -- The ESC Honorary Members Committee would appreciate receiving nominations of entomologists for honorary membership to fill the two existing vacancies.

Manpower Study. -- The Governing Board has allotted $3,000 to initiate a nationwide manpower study of entomologists.

Scholarship Fund. -- The Scholarship Fund has been registered whereby all donations will now be tax deductible. Donations have been coming in, however until such time as the fund is large enough, an annual "award" of $500 will be provided by the Society to a worthy full time postgraduate student specializing in entomology at a Canadian university. The award will later be increased to a $2,000-$3,000 "scholarship" as monies in the Scholarship Fund become available.

Faunal Survey. -- Approval was given to forward a proposal for " a biological survey of the insects of Canada" (with an annual budget of more than one million dollars) to the Biological Council of Canada.

NRC. -- The President would appreciate nominations of ESC members from which Society representatives could be chosen for NRC or NSRC grant selection and advisory committees.

W. A. Charnetski
Regional Director

REPORT OF THE INSECT COLLECTION COMMITTEE

There were only three entries in the competition this year. This was probably in part due to a breakdown in the normal channels of advertising through the Department of Education. This problem was discussed at the Annual General Meeting and many suggestions were forthcoming.

The following prizes were awarded:

First Prize (Junior)	Billy Charnetski Jr. Lethbridge
Second Prize (Junior)	Brian Osberg Lethbridge
Third Prize (Junior)	Leisa Murdoch Crossfield

It was difficult to separate the first two collections. The first was a well presented collection of Lepidoptera, the second a more extensive collection of other insect orders, but not so well presented. As usual Miss Murdoch presented a carefully reared series of moths and butterflies.

D.A. Craig, Chairman
Insect Collection Committee

REQUEST FOR DATA ON ENTOMOLOGISTS AND RELATED SPECIALISTS

Data are being assembled on the entomologists of the world, past and present; authors, collectors, dealers, acarologists, and related specialists. Data on about ten thousand entomologists have already been accumulated. The list is now being updated by asking for data from living entomologists (including acarologists).

Gould published comparable data concerning botanists in 1965. The entomologists retrieval codes used in this project will follow the system developed by Sydney Gould and will be registered and combined with Gould's. An individual's code will thus be the same unique code in both systems.

Data will be made available for use in data retrieval systems. The purpose is to establish an author data bank for working with entomology and related fields (mathematics, biometry, color, etc.). Personal data on finances, marriage, political affiliation, opinions, use of products, and other data that are not pertinent to entomology are not required or wanted. The sole purpose is to aid in the storage of entomological and related data. The results will be made available in three forms: (1) published list of names, dates, sources, interests, (2) data will be placed on the requestor's computer tape for possible use in his system, and (3) full data on an individual in the files will be made available upon request. It is hoped that, subsequently, additional data (list of publications, new taxa, etc.) will also be stored on tape and made available for distribution and retrieval. No attempt has been made to be exclusive; the intent is to be inclusive. If you have published or contributed in any way to the field of entomology, it would be appreciated if you would fill out and return the enclosed Questionnaire.

- Kent H. Wilson; P.O. Box 1097; Edmond, Oklahoma, 73034, U.S.A.

POTPOURRI

1. Announcement of a book called "Mosquito Control", containing papers presented in 1973 at an International Seminar on Mosquito Control.

2. Announcement of the White Owl Conservation Awards program and copies of the White Owl newsletter called "News".

3. Brochure advertising "Eco-News", a newsletter for urban children.

4. Brochures and application forms for those seeking membership in Canadian Nature Federation.

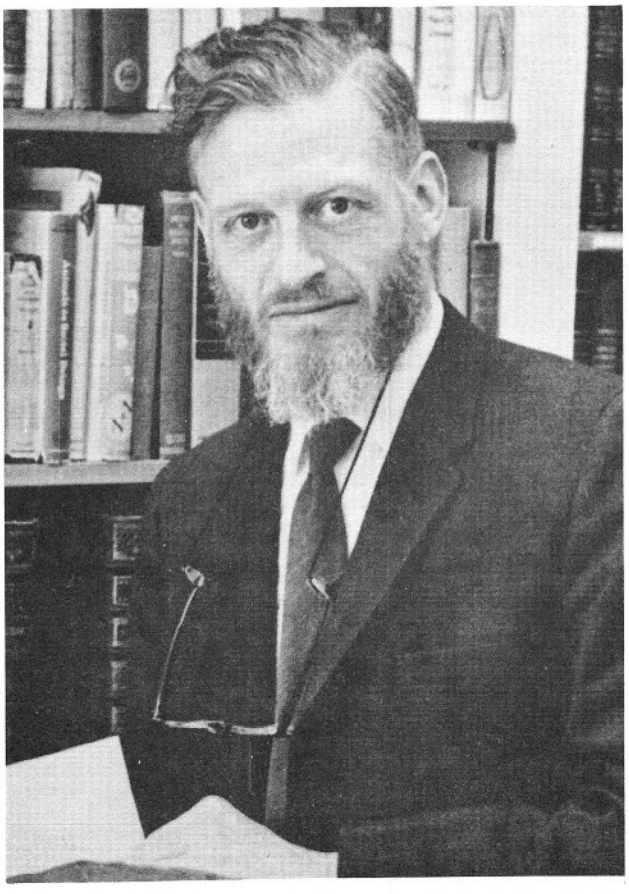
5. Copy of Information Bulletin No. 1. giving the terms of reference and background information for public hearings on flood control and water management in the Paddle River basin.

6. Final copy of a brief presented by Dr. N.D. Holmes on behalf of the Entomological Society of Alberta to the Alberta Environmental Conservation Authority hearings on Pesticide Use in Alberta.

7. Monthly notices of new publications of Environment Canada.

8. News release announcing the formation of an International Council of Environmental Groups with participating organizations represented from Canada and the United States.

Please contact the Secretary-Treasurer for further details regarding any of the above items.



OBITUARY

BRIAN HOCKING 1914 - 1974

Brian Hocking was born in London, England, on September 22, 1914 and died in Edmonton, Alberta on May 23, 1974. His general formal education was received in London and Horsham, Sussex, and his undergraduate university education was at The Imperial College of Science and Technology and The Royal College of Science. His undergraduate career was distinguished, and he received the Murchison Medal in Geology and graduated in Biology with Honors.

Toward the end of his undergraduate training he married Jocelyn Hicks, and in 1938 they left England for India, where Brian had accepted employment as an assistant manager with a firm that was involved in boat building and sugar refining. After two years he became science master at the New School, Calcutta/Darjeeling, and in January, 1942 he left this institution to join the Indian Army as a lieutenant. At the end of the war, in 1945, he resigned from the army as a major, and with Jocelyn and their three young children, left India for England, and ultimately, the University of Alberta.

Brian joined the Faculty of Agriculture of this institution as Assistant Professor of Entomology in the Fall of 1946, where under the aegis of the late Professor E.H. Strickland, he launched a career in teaching and research. During the first six years he lectured in entomology, did research on biting flies at Churchill, Manitoba during the summer, and worked on completion of his own career as a student. He took an MSc degree at the University of Alberta in 1948, and a PhD from the University of London in 1953.

In 1951 he became associate professor and in 1954, Professor and Head of the Department, replacing Professor Strickland in the latter position. Under his guidance, the Department eventually reached its maximum size, with 14 staff (academic and non-academic) and 25 graduate students. He was determined to have a broadly based establishment, and encouraged each of his staff to develop their own special talents and interests. To the work of each of us he showed interest and respect, and we in turn followed his example. In this, as in all things, he led by example, not precept.

He was a skilled teacher, having just the right combination of expository ability and sense of the essential to get across a subject. He was intolerant of laziness and carelessness, either in writing or in speaking. To students, and especially the less experienced ones, he seemed formidable but the better ones soon learned that he was approachable. For graduate study, Brian believed that the best results would be obtained from a student working on a problem of intense personal interest. He encouraged all students to develop their own ideas.

His concept of education extended beyond the classroom, and in his desire to contribute to the education of the citizens at large he emulated explicitly T.H. Huxley. To achieve this aim, Brian over the years gave a series of radio and television presentations noted for their sound science, good humor and wit. Eventually, these presentations served as the basis for several books.

He enjoyed the companionship of good literature, and alluded skillfully to the writings of the literary masters in his own work. Brian's interest in the written word took two other forms, in combination with his entomological activities: on the one hand, he accumulated a

fine collection of antequarian publications on insects (now in the Cameron Library, University of Alberta), and on the other, he founded and edited an entomological journal, *Quaestiones entomologicae*, now in its eleventh volume. Timely, thoughtful, highly original and delightfully written editorials graced the first pages of many issues, expressing Brian's views on a range of topics of concern to a scientist with well developed humanitarian instincts.

As a research worker, Brian was superb. He had a sense of the essential, combined with curiosity and highly original approach. His work ranged from the unapplied to the highly applied, with the extremes combined in varying proportions depending upon the circumstances. Biting flies and social insects were his chief media of expression, and his avenue of approach was through mathematical and physical analysis of various aspects of environmental interactions (physiology and ecology in the broadest sense). His publications are numerous and succinctly written.

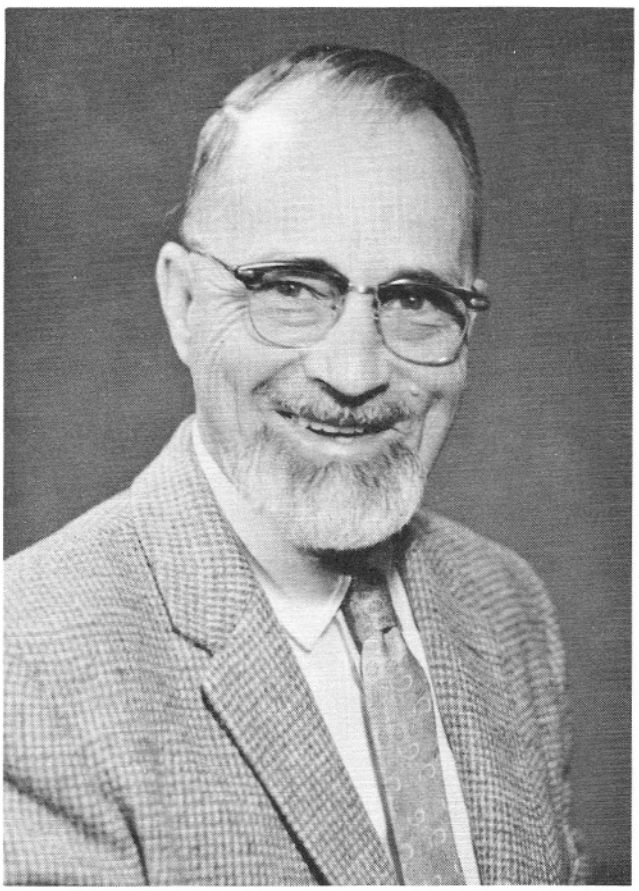
He viewed insects and people through the same looking glass. His interest in protecting humans from the depredations of biting flies is confirmed by his writings, but they also exhibit his keen interest in protecting insects and other residents of this planet from the depredations of human populations that have become too large for the good of the environment.

Professionally, he was distinguished, having been awarded a fellowship in the Royal Society of Canada (1968) and the Gold Medal of the Entomological Society of Canada (1973). He served as president of the Entomological Society of Canada (1960) and of the Entomological Society of Alberta (1967). He attended meetings regularly, and made substantial contributions in the form of oral presentations. He attended all of the International Congresses of Entomology held over the past 20 years. Brian was also a member of various government panels, such as the Defense Research Board, and of the World Health Organization.

Brian served ably the University of Alberta, mainly as a department chairman, but also as an active member of various committees. He did not seek out such activities, but did what had to be done.

His loss is deeply felt, and he will long be remembered as an outstanding scholar, associate and friend. He was a worthy successor to the illustrious E.H. Strickland, and has left to his university colleagues a legacy in the form of our department that we must cherish, honor and nurture, as he did. More broadly, he left to Canadian entomologists a legacy described in his acceptance speech when he received the Gold Medal. And his own life was an example to be emulated.

George E. Ball



OBITUARY

GEORGE REDSTONE HOPPING 1899 - 1974

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

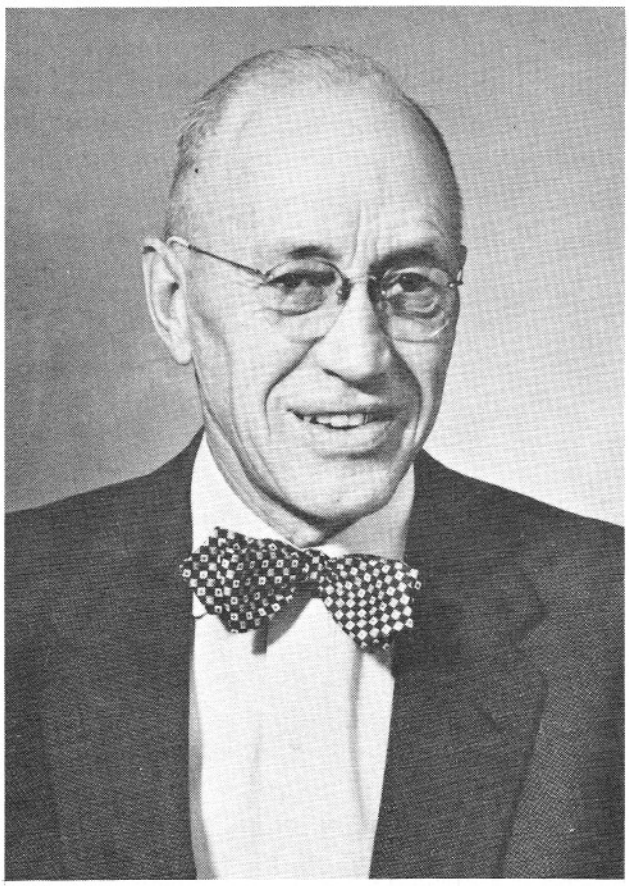
In 1947, he was loaned by the Federal government to the University of British Columbia for one year, to establish and teach courses in forest entomology. Later he was appointed officer-in-charge of the Calgary Laboratory, a position he held until 1960 when at his own

request he was allowed to return to his specialty--research in bark beetle taxonomy. George retired from the Federal Service in 1964.

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

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

R.W. Reid



OBITUARY

Howard Loomis Seamans, 1891-1974

Dr. Howard Loomis (Hod) Seamans died on December 17, 1974, in Ottawa, Ontario. He was born in Wawatosa, Wisconsin, and received his public and high school education there. In 1910, Hod and a sister moved to Kendall, Montana, to homestead. After two years there he entered Montana State University and graduated in 1916.

From 1916 to 1919 he was Assistant Entomologist for the State of Montana, a special agent for the USDA Bureau of Entomology, and also served in the US army. In 1919, he was appointed Assistant Professor of Zoology at the Montana State College where he worked on the pale western cutworm, grasshoppers and systematics of anthomyiidae.

On March 28, 1921, Dr. Seamans was appointed officer-in-charge of the Dominion Entomological Laboratory at Lethbridge, Alberta, following Dr. G.H. Strickland who resigned to accept a professorship at the University of Alberta.

While at Lethbridge, Hod initiated projects on: pale western cutworm, grasshoppers, the wheat stem sawfly, insect pollinators, the Say stink bug, and several vegetable pests. In 1944, he was appointed Head of the Field Crops Insect Unit, Agriculture Canada, and moved to Ottawa.

For many years Hod greatly influenced entomologists and entomological research in Canada. He knew nearly every entomologist in Canada and with most he had a keen appreciation of their research. He was exceptionally patient with young entomologists and was always willing to listen and give good advice. He always urged young scientists to know their insects intimately and his favorite words of advise were: "Go live with the bug".

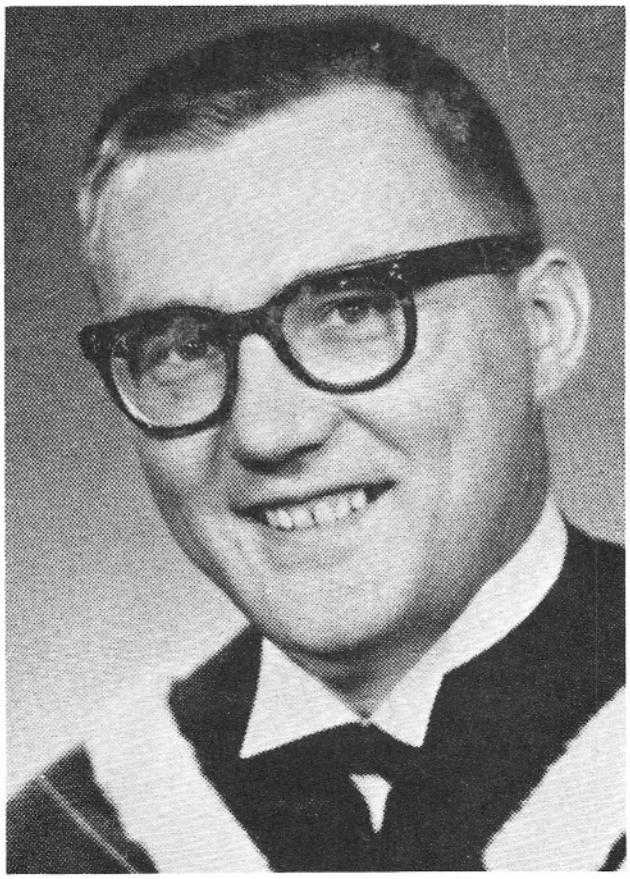
At work, and in the community, Hod was an extremely kind, considerate, and optomistic leader. He assisted people wherever possible, always with a friendly smile, an encouraging note, or a helping hand.

Hod retired from Agriculture Canada in 1956. In 1938, he was awarded the Professional Institute Medal for meritorious achievement. His contribution to the biology and control of the pale western cutworm was specifically cited. In 1957, he was made an Honorary Member of the Entomological Society of Alberta for his contributions to entomology. In 1963, he was awarded a Doctor of Law degree from the University of Calgary for his valuable contributions to Canadian agriculture as a scientist and administrator.

Hod is survived by his wife, Mildred (Mick), who resides in Ottawa.

Hod was fortunate in having a long life and he lived it well as a compassionate and understanding scientist, administrator,and humanitarian.

A.M. Harper



OBITUARY

ROBERT DONALD DIXON 1938 - 1974

Robert (Bob) Dixon passed away suddenly at age 36 in Edmonton, Alberta, the 22nd of November 1974.

Born in Edmonton in 1938, Bob at the age of 10 moved with his parents to Sheraton, Manitoba. After completing elementary school in 1954, he worked as a labourer until he joined the Canadiam Army in 1955. After his discharge in 1958, he returned to Northern Manitoba where he worked as a fisherman and miner.

In September 1960 at the age of 22, he entered high school, graduating in 1963. Possessing an interest in entomology he then entered the Faculty of Agriculture, University of Manitoba, graduating in 1967 with the degree of B.S.A.and obtaining a M.Sc. in 1968. His graduate work involved research on mosquito behaviour and their control.

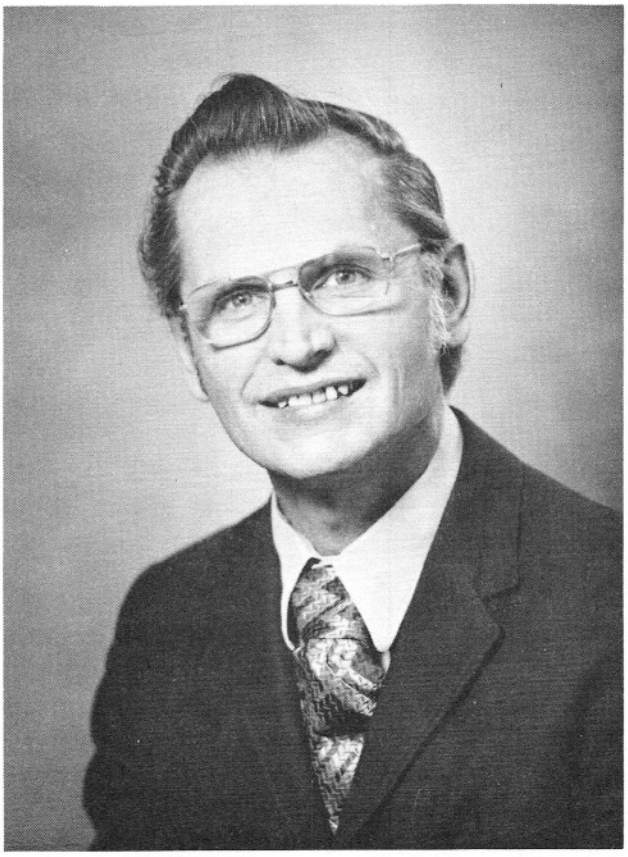
In 1968 he joined the Alberta Department of Agriculture as Entomologist working on a wide spectra of entomological problems. In 1970 he became Head of the Plant Industry Laboratory, the position he held at the time of his death.

He was a member of the Entomological Society of Manitoba, Entomological Society of Alberta, and the Entomological Society of Canada. In addition he was an active member of The Canada Committee on Biting Flies, The Alberta Mosquito Control Association, and North-West Mosquito and Vector Control Association, and many other provincial Committees. He was Co-ordinator of Biting Fly Research in Alberta and a leader in the establishment of urban mosquito abatement programs in Western Canada.

Bob was a true agricultural entomologist in that he was always concerned with the agricultural community and its problems in relation to insects.

Bob enjoyed a short but fulfilling entomological career, and as a man was admired by many. He had a love for nature and enjoyed many outdoor activities. He is remembered with great affection by his many colleagues and friends.

M.G. Dolinski



OBITUARY

ROBERT KASTING 1924 - 1975

Dr. Robert Kasting, 51, a senior research scientist of the Lethbridge Research Station, died in Lethbridge on March 2.

Dr. Kasting had developed international recognition for his research on insect biochemistry and nutrition. Born in Edmonton, he graduated from the University of Alberta in 1946 with his B.Sc. in biochemistry and in 1948 with his M.Sc. He continued his studies at the University of California, Berkeley, and obtained his Ph.D. in 1956.

After conducting research in Ottawa for the Canada Department of Agriculture on insecticide analysis from 1948 to 1950, he came to the Science Service Laboratory as head of the Chemistry Section.

Dr. Kasting developed methods for studying insect nutrition that were used by biochemists in many other countries. During his career, he published and presented 83 articles on his research. The major object of his research was to assist in developing plants resistant to insect pests such as the wheat stem sawfly, cutworms, and grasshoppers. He spent 1969-70 in Sweden studying advanced techniques of chemical analysis.

At the time of his death, Dr. Kasting was working on determining phytotoxins in rapeseed plants, the effect of insecticides on quality of wheat, as well as studies on insect nutrition.

Bob was very active in the community. He served on the executive of many organizations including the Hamilton Home and School Association, Lethbridge School District No. 7 Council, Lethbridge Amateur Swim Club, Canadian Amateur Swim Association, Lethbridge Minor Football Association, and the Lethbridge Minor Baseball Association. He was an Elder at the Southminster United Church and had served as president of their Couples' Club.

He was a member of the Agricultural Institute of Canada, the Alberta Institute of Agrologists, and the Biological Society of Canada.

Bob is survived by his wife, Ursula, and four children, Colleen, Robert, Jr., Norman, and Wendy.

Our deepest sympathy is extended to Ursula and the family. Bob will be greatly missed by us all.

W.A. Charnetski

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