

PROCEEDINGS OF THE THIRD ANNUAL MEETING  
OF THE  
ENTOMOLOGICAL SOCIETY  
OF  
ALBERTA



CALGARY - ALBERTA  
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Proceedings of the

ENTOMOLOGICAL SOCIETY OF ALBERTA

Vol. 3

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EXECUTIVE MEETING

(Held at the Officers' Club, S.E.S., Ralston, Alberta)  
29 March, 1955

An executive meeting of the Entomological Society of Alberta was held at the Suffield Officers' Club, Suffield Experimental Station, on the afternoon of 29 March, 1955. The meeting was called to order by Dr. H. Hurtig, President of the Society, at approximately 2.15 p.m. In addition to Dr. Hurtig, the following executive members were present: S. Mann, W. Hopewell, D. McMullen, L. Jacobson and Dr. C. Farstad.

The minutes of the previous executive meeting were read by the secretary. Mr. Jacobson suggested deletion of any reference to term of office of Regional Director, since this point is not specifically covered in the constitution. Other members present concurred with this suggestion. The minutes of the last executive meeting were then adopted as amended.

Under business arising from the minutes there was some discussion regarding the term of office of the Regional Director. Since this point among others was not clearly covered by the constitution of the National Society, Dr. Farstad suggested that the Alberta Entomological Society should prepare a resolution for presentation to the National Society which would help bring the constitution of the National Society up-to-date. Mr. Jacobson moved that the subject be tabled until the next general meeting of the Alberta Society at which time it would be put on the agenda for discussion. Dr. Farstad seconded the motion and, all being in favor, the motion was passed. The secretary was instructed to contact the Canadian Entomological Society to obtain up-to-date copies of the Constitution of the National Society and to make these copies available to the Regional Director.

Still under business arising from the minutes, draft copies of the proposed circular letter to the Society members were distributed among the Executive members present. All amendments were discussed and the secretary was instructed to send out the notice of proposed amendments as drafted. It was also proposed that Article 1 (b) of the By-laws of the Society be amended to read:

"A student membership fee shall be set at one half the local regional fee, such a member having the privileges of full membership other than voting privileges".

This being an amendment to the Bylaws does not require advance notice but should be included on the agenda for the next general meeting.

Under new business the secretary read out correspondence with Prof. Mitchener, who is Chairman of the National Committee on Common Names of Insects, wherein it was requested that the Alberta Society submit to him the names and addresses of our local committee on common names of insects. The executive then proposed the following members to be on this committee: Dr. G. E. Ball, Dr. G. A. Hobbs, W. C. McGuffin and J. Weintraub. Dr. H. Hurtig as President of the Alberta Society of Entomologists then appointed these members to form the local committee on Common Names of Insects with Dr. Ball as Chairman. The secretary was instructed to write each of these members informing him of his appointment, and also to inform Prof. Mitchener and R. H. Wigmore.

Still under new business, it was suggested that the next general meeting of the Alberta Society be held some time before the next general meeting of the National Society and that Dr. Farstad, as Regional Director, prepare an agenda of items of concern to the National Society to be discussed at the next Alberta Society general meeting. Further emphasis was put on the need for revision of the Constitution of the National Society.

Mr. Jacobson mentioned the possibility of having to raise membership fees due to the National Society's need for more money. This need was caused by the increased publication costs discussed at the last National General Meeting (3 November, 1954), and at the National Executive meeting of October 1954. It was suggested that the Provincial Government be again approached for financial assistance but being careful to approach somebody sympathetic to the cause. It was suggested that the cultural view be stressed rather than the professional view-point, and also stress the service that can be done for the Province of Alberta by the Society.

Mr. Mann's letter of resignation as secretary to the Executive was then discussed. It was pointed out that the resignation was due only to transfer to Ottawa in April. Mr. R. D. McMullen was appointed interim secretary by the Executive.

Suggestions for membership promotion were made and among the suggestions were:

- (1) a summer field trip,
- (2) appointment of a Membership Committee to encourage membership particularly in commercial concerns. Dr. Farstad mentioned the possibility of enrolling sustaining memberships among the industries.

It was suggested that the Proceedings of the last general meeting be sent to detached Alberta Society members to encourage such members to keep up their membership to the Society.

Mr. McMullen reported that the draft of the Collectors' Manual he has been preparing is almost ready for printing. It was suggested that this draft could be discussed at the next Executive meeting and that the various regional educational directors be invited to this meeting. It was felt that the Manual should be published in time for this season's collecting.

Authority was granted the treasurer by the Executive to run a petty cash account if it was required for postage, etc.

The meeting was adjourned at 3.35 p.m.

#### EXECUTIVE MEETING

(Held at the Officers' Club, S.E.S., Ralston, Alberta)  
18 May, 1955

An executive meeting of the Entomological Society of Alberta, was held at the Suffield Officers' Club, Suffield Experimental Station, on the afternoon of May 18, 1955. The meeting was called to order by Dr. H. Hurtig, President of the Society, at 2.30 p.m. Other members of the Executive present were: Dr. C. Farstad, L. Jacobs, W. Hopewell, and D. McMullen.

The minutes of the previous Executive meeting were read by the secretary. The minutes were adopted as read.

Under business arising from the minutes, it was suggested by Dr. Farstad that copies of the present constitution of the Canadian Entomological Society be mimeographed and sent to all the members of the Alberta

Society executive for criticism and suggested revision.

Also under business arising from the minutes, Dr. Hurtig stated that he had approached Mr. Bob Putnam, Assistant Deputy Minister of Agriculture for Alberta, on the matter of financial assistance to the Society from the Alberta Government, as suggested at the previous executive meeting. Because of the forthcoming election in the Province, slow progress is being shown in this matter.

Under new business, a letter from Professor B. Hocking of the University of Alberta regarding candidates for the award of the Entomological Society of Alberta Prize for the leading student in entomology, was read by Dr. Hurtig. After some discussion, it was moved by Dr. C. Farstad and seconded by W. Hopewell, that the prize be awarded to R. B. Madge, second year Arts and Science student, who is majoring in Entomology. The motion was passed.

Also under new business, there was some discussion regarding field trips to collect insects, sponsored by the Entomological Society of Alberta. Dr. Hurtig suggested that three field trips be held, one to the Steeville area of the Red Deer River badlands, one to the area around Banff, and one in the vicinity of Red Deer. These field trips would provide opportunities for collecting insects in three of Alberta's main ecological type areas. It was hoped that as many members as possible would attend each collecting trip. The trips are for adult members of the Society and their families. Mr. L. Jacobs moved and Dr. C. Farstad seconded that the idea for the three field trips as discussed, be approved.

Arrangements for the Steeville trip should be made by members of the executive at Ralston, and for the field trips to the Banff and the Red Deer areas should be initiated by members of the executive in Calgary and Edmonton respectively.

Copies of the text of the Society's insect collecting manual were shown to the members of the executive present, and descriptions of figures to be included were given; the best means of printing the manual were discussed. Mr. L. Jacobs undertook to see the Lethbridge Herald about printing covers for the manual. It was suggested by Dr. Hurtig and approved by the executive that a motion of commendation to R. D. McMullen for his effort in producing this manual be included in the minutes of the meeting.

Dr. C. Farstad moved and L. Jacobs seconded a motion that the President write a letter to Mr. B. Glen of Ottawa deploring the lack of information on and indifference towards preparation for the 10th International Entomology Congress.

The meeting adjourned at 4.00 p.m.

## EXECUTIVE MEETING

(Held in Dr. H. Hurtig's office, S.E.S., Ralston, Alberta)  
11 August, 1955

An executive meeting of the Entomological Society of Alberta was held in Dr. H. Hurtig's office, Suffield Experimental Station, on the morning of August 11, 1955. The meeting was called to order by Dr. H. Hurtig, President of the Society at 10.45 a.m. Other members of the executive present were Mr. L. Jacobson, Mr. W. Hopewell and Mr. D. McMullen.

The minutes of the previous meeting were read by the secretary, Mr. D. McMullen. The following corrections were made to the minutes:

Paragraph two of business arising from the minutes was corrected to read: Dr. Hurtig stated that he had asked Professor Hocking to approach Mr. Bob Putnam, Assistant Deputy Minister of Agriculture for Alberta, on the matter of financial assistance to the Alberta Entomological Society from the Alberta Government, as suggested at the previous executive meeting. Because of the forthcoming election in the Province, slow progress is being made in this matter.

The name Mr. L. Jacobs appearing in the previous minutes was corrected to read Mr. L. Jacobson.

The minutes as corrected were adopted.

Under matters arising from the minutes, Dr. Hurtig gave a verbal report on the Insect Collecting Field Trips to the "Badlands" near Steveville, and to the Red Deer, Sylvan Lake area. A pleasant and interesting time was had by all participants of the field trips. It was felt that both field trips were highly successful in promoting the interests of the Society, and in making contact with prospective members. Sixty-eight adults and approximately thirty children attended the "Badlands" field trip. Approximately twenty-five people attended the Red Deer-Sylvan Lake trip.

Also under matters arising from the minutes, Dr. Hurtig said that he had received letters of reply from Dr. B. Glen of Ottawa in answer to his letter deploring the lack of information on and indifference towards preparation for the 10th International Congress of Entomology. Satisfactory information regarding plans for the Congress has since been received. The Alberta Society is co-operating with the parent Society on the matter of obtaining financial aid from the Alberta Government for the Congress.

Under new business Mr. W. Hopewell, treasurer, presented an interim treasurer's report. It was reported that at present there are



59 paid up members, 17 delinquent members, and a bank balance of \$74.52. It was moved by Mr. D. McMullen and seconded by Mr. L. Jacobson that the report be adopted.

Also under new business, Dr. Hurtig reported that it would be impossible to hold the 1955 Annual Meeting of the Society at the Suffield Experimental Station because of Government policy and security reasons. Quarters and rations are heavily subsidized by the Government. If all the members of the Society were in Government employ it might have been possible to obtain permission to hold the meeting at S.E.S. However, since the membership of the Society is open to the general public, it is impossible.

Because of the lack of personnel at Ralston to handle arrangements for an annual meeting, and because Medicine Hat is in the far south-east corner of the Province, it was suggested by Dr. Hurtig that the meeting be held in Calgary, which is more central. Arrangements for a meeting place and organization of a social evening would be placed in the hands of a Calgary committee; the remainder of the programming to be done by the executive at Ralston. Further discussion on the matter indicated, however, that if at all possible the meeting should be held in Medicine Hat.

It was moved by Mr. L. Jacobson and seconded by Mr. W. Hopewell that the Ralston members of the executive decide upon the date and the best place to hold the meeting. The motion was carried.

Also under new business Dr. Hurtig presented a draft of a brief requesting funds from the Alberta Provincial Government for the 10th International Congress of Entomology. A copy of the draft is attached to the minutes. It was moved by Mr. W. Hopewell and seconded by Mr. L. Jacobson, that the brief be adopted.

Dr. Hurtig also presented a draft of a brief requesting funds for a continuing grant to the Entomological Society of Alberta from the Alberta Provincial Government. The meeting suggested that the last paragraph be rewritten to include a suggestion by Dr. Hurtig that the grant may be given in the form of use of the Queen's Printer in Edmonton to publish our annual Proceedings and other papers up to the value of the grant or in lieu of this, a sustaining grant of money. It was also suggested that a statement be included in the paragraph that precedent for grants from Provincial Governments to provincial entomology societies exists in the Provinces of Quebec, Ontario and British Columbia. Dr. Hurtig rewrote the last paragraph to include the preceding suggestions. It was moved by Mr. L. Jacobson and seconded by Mr. D. McMullen that the brief be adopted.

The meeting adjourned at 12.00 noon for lunch, and reconvened at 1.45 p.m.

Also under new business, it was suggested that the secretary write the regional directors of the Insect Collecting Competition on the matter of arranging press and radio publicity regarding the Amateur Insect Collectors' Competition. All entries for the competition should be in the hands of the regional directors by September 15. The regional directors will bring the best three collections of each area to the annual meeting for final judgment.

Also under new business, there was a discussion on the program for this year's annual meeting. It was decided that the executive meeting should be held Friday afternoon. On Friday evening, the main portion of the business would be held, followed by a social evening. On Saturday morning the final portion of the business meeting would be held, including reports of committees appointed the day previous, and election of officers for the following year. The presentation of reports and reading of papers would follow the business meeting and extend into the afternoon. The opening of the paper reading session should be devoted to reports of highlights and occurrences of insects in Alberta for the current year. It is recommended to future executives that this feature be an annual event at all future annual meetings. All reports and papers given at the annual meeting should be typed and forwarded to the secretary before the annual meeting.

It was suggested that the secretary write all members of the executive to remind them that a discussion of the Constitution of the Canadian Entomological Society is due for the annual meeting. Briefs of suggestions and criticisms should be prepared in advance, and a copy mailed to the president. These will be discussed at the executing meeting before the annual meeting.

Also under new business is the matter of a donation of money by Mr. Birch of Birch Fumigators, Edmonton, for use as a research scholarship at the University of Alberta.

In correspondence with Prof. Hocking and Dr. Hurtig, Mr. Birch indicated that he is willing to donate five hundred dollars to be used as a research scholarship at the University of Alberta. Prof. Hocking feels that \$1500 is the minimum amount necessary to obtain the services of a graduate student. It was suggested that the Society raise another \$1000 from commercial insecticide firms to add to the grant. The executive of the Society will decide upon the general nature of the research to be undertaken. It was decided, pending Mr. Birch's approval, that the Society will accept the \$500 from Mr. Birch and put it in a trust account until the other \$1000 can be raised. At such time, when the needed amount is raised, the scholarship will be made available.

The meeting adjourned at 3.00 p.m.

## EXECUTIVE MEETING

(Held at the Horse Shoe Inn, Calgary, Alberta)  
7 October, 1955

An executive meeting of the Entomological Society of Alberta, was held in the Burgundy Room of the Horse Shoe Inn, 1318 - 17th Avenue West, Calgary, Alberta, on the morning of October 7th. The meeting was called to order by President, Dr. H. Hurtig, at 9.30 a.m. Other members of the executive present were: Dr. W. C. Farstad, Mr. L. A. Jacobson, Dr. W. C. McGuffin, Dr. B. Hocking, R. D. McMullen and W. W. Hopewell.

Since the minutes of previous executive meetings were so voluminous, and since all members of the executive were thoroughly familiar with them, the president suggested that reading of the minutes of the previous executive meeting be dispensed with.

The first piece of business arising from the agenda was that of a report of the members of the executive on the Canadian Entomological Society Constitution. It was pointed out by Dr. C. W. Farstad that when the Canadian Entomological Society was formed in 1950, that in order to facilitate and speed the formation, only a skeleton of a constitution was drawn up and adopted. He also stated that there is need for a more complete constitution for the Canadian Entomological Society, so that it may be incorporated. Incorporation of the Canadian Entomological Society is necessary for protection of its officers and members because of the large amounts of monies it handles and possible liabilities that may be incurred in organizing the 10th International Congress of Entomology. It was suggested that the Chairman of the Resolutions committee be informed to present a resolution to the annual meeting of the Alberta Entomological Society for consideration of presentation at this year's annual meeting of the Canadian Entomological Society.

The second piece of business from the agenda was the appointment of a Resolutions Committee for this year's annual meeting of the Entomological Society of Alberta. Appointed to the Resolutions Committee were: Dr. C. W. Farstad, Chairman: Dr. G. Ball, and Dr. W. C. McGuffin.

The third point of business from the agenda was the appointment of a Nominations Committee for this year's annual meeting of the Entomological Society of Alberta. Appointed to the Nominations Committee were: Mr. L. A. Jacobson, Dr. B. Hocking and C. E. Brown.

On the matter of the fourth piece of business on the agenda, Dr. B. Hocking spoke on behalf of Mr. Birch of Edmonton, stating that the

proposed donation of \$500 by Mr. Birch to the Entomological Society of Alberta for use as a research scholarship at the University of Alberta is made on the condition that a further \$1000 be raised by the Society to make the total amount of the scholarship \$1500 which is considered the minimum amount necessary for such a scholarship. Dr. Hocking when questioned whether this scholarship and offer of Mr. Birch was proposed to be continued yearly, stated that he thought it was proposed for one year only, but could be considered to be continued yearly if good results were obtained the first year.

Mr. L. A. Jacobson suggested that a committee be formed to find out what response might be expected from the canvass of donations from other pest control operators in the province, and commercial insecticide firms. Appointed to the committee were Mr. R. Russell and Dr. B. Hocking.

Dealing with further business Mr. L. A. Jacobson asked whether as yet any response had been made to the request from the Canadian Entomological Society for financial aid from the Alberta Entomological Society for use in publishing the Canadian Entomologist. From discussion it was felt since the Alberta Entomological Society is negotiating with the Alberta Provincial Government for an annual sustaining grant to the Entomological Society of Alberta as well as a grant to the Canadian Entomological Society for the 10th International Congress of Entomology, that for the present time the Alberta Society cannot look to giving any financial aid to the National Society.

The secretary received instructions to write a letter of condolence to Mrs. K. Bowman. Mr. K. Bowman who was a most valued member of the Entomological Society of Alberta and an outstanding amateur Lepidopterist, passed away September. 25th.

Dr. B. Hocking suggested that the Editor-Librarian send a copy of the proceedings of the annual meeting to the Secretary-Treasurer of the Alberta Natural History Society, Mr. G. N. Finn, 4519 - 48th Avenue, Red Deer, Alberta.

The meeting adjourned at 10.30 a.m.

### THIRD ANNUAL MEETING

(Held in the Burgundy Room of the Horse Shoe Inn, 1318 - 17th Avenue West,  
Calgary, Alberta)  
7 and 8 October, 1955

The Third Annual Meeting of the Entomological Society of Alberta, was called to order by President, H. Hurtig at 11.00 a.m. October 7th, 1955. Thirty-seven members were present.

Dr. H. Hurtig, President, in his welcome address congratulated all members of the Society on a very successful year. He stated that the Society had taken great strides toward the revival of amateur entomology through the summer field trips, publicity received through newspapers and radio, publication of the Insect Collector's Guide, and organization of the Insect Collecting Competition. He thought that all members of this young and vigorous society could look forward to bigger and better things in the future.

Subsequent to the President's address of welcome, the secretary read the minutes of the preceding annual meeting and the minutes of the preceding executive meeting. There was no correspondence of note to be presented to the meeting.

The minutes were adopted as read.

At this time Dr. H. Hurtig announced to the general meeting, the death on September 25th of Mr. K. Bowman. Mr. Bowman, a charter member, was one of the Society's most valued members and an outstanding Lepidopterist.

Under business arising from the minutes the matter of amendments to the Constitution of the Entomological Society of Alberta - At the Executive Meeting 30th September, 1954, at R. H. Painter's headquarters, Lethbridge, the executive unanimously proposed the following amendments to the Constitution.

Article 4 - Amended to read:

"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.

The meetings shall be as informal as possible."

Article 5 - Amended to read:

"The officers of the Society shall consist of a President, Vice-President, Secretary, Treasurer, Editor-Librarian, Immediate Past-President, and three Directors. The President, Secretary, Treasurer, and Editor-Librarian shall be elected from the same locality. These officers shall constitute the Executive with full power to act on behalf of the Society within the bounds of the Constitution, and to appoint committees as necessary."

Article 6 - Amended to read:

"Elections shall be held once a year at the annual meeting, and officers so elected shall take office at the beginning of the calendar year and remain in office for a term of one year. The office of President shall not be held by the same member for more than two consecutive years."

Notice of motion of the proposed amendments to the Constitution was given by the Secretary to all members as required by Article 7 of the Constitution. There were no questions at the meeting on these proposed amendments. The motion passed unanimously.

It was moved by Mr. L. A. Jacobson and seconded by Dr. C. W. Farstad that Article 1 (b) of the Bylaws be amended to read:

"A student membership fee shall be set at one-half the local regional fee, such a member having all membership privileges except voting privileges."

Motion passed.

It was moved by Mr. W. W. Hopewell and seconded by Mr. P. E. Blakely that a section 1 (d) be added to the Bylaws reading:

"A special assessment of \$1.00 per year shall be assessed of full members to provide for an annual prize in Entomology at the University of Alberta and other small prizes for the Insect Collection Competition."

Motion passed.

Dr. H. Hurtig raised the question as to whether or not the place of every annual meeting should be fixed as being in Calgary

because of its central location in the Province. Mr. D. A. Smith concurred with this suggestion. Further discussion from other members pointed out however, that an alternation of meeting places gave a better chance to many members of attending meetings if not every year, at least once every three years. Dr. C. W. Farstad felt that since it stands in the Constitution, that the place of the annual meeting may be decided by the executive. This present arrangement ensures that the place of meeting will be chosen each year to the best advantage of the Society. The meeting concurred with this idea.

Reports on Junior Activities were received from Edmonton, Calgary, Lethbridge and Medicine Hat. It was thought that the earliness of the Lethbridge Fair will not down the number of collections to be received from that area, but interest in insect collecting has been high. Dr. Hocking sent out 2500 copies of the announcement of the collection competition to schools throughout the Province, and various junior organizations, as well as 200 leaflets on insect collecting. More interest in insect collecting than in previous years was shown in Calgary and Medicine Hat this year. It was felt that distribution of the booklet, "Insect Collectors' Guide", will be of great aid in stimulating interest and more and better entries in the competition next year. Dr. Hocking stated that one great difficulty encountered by amateurs is in obtaining collecting materials such as insect pins, spreading boards and other materials. This has been partly overcome by persuading a hobby shop in Edmonton to stock a supply of collecting materials. These supplies may be available to other hobby shops in Alberta through the one in Edmonton.

Dr. B. Hocking reported to the meeting that this year's prize to the student with the highest standing in Entomology was awarded to Mr. R. B. Madge, second year Arts and Science student.

Dr. H. Hurtig reported to the meeting the state of matters regarding a proposed research scholarship in Entomology at the University of Alberta. These are mentioned in the minutes of the executive meeting.

Dr. H. Hurtig reported that at present there is a draft of a request for financial aid to the 10th International Congress of Entomology before several of the departments of the Alberta Provincial Government. He also reported that a request for a sustaining annual grant of monies, or the use of the Queen's Printer for publishing the Proceedings of the Entomological Society of Alberta, is before the Provincial Government.

The first session of the business meeting adjourned at 12.00 noon.

At 1.30 p.m. the meeting was reconvened for reading of papers under the chairmanship of Mr. R. D. McMullen.

The following papers were presented:

1. Cycles in Population of Sheep Keds, by W. A. Nelson.
2. Freezing and Melting Points of Insect Tissues, by R. W. Salt.
3. Recent Observations on the Hessian Fly, Phytophaga destructor (Say) in Southern Alberta, by N. D. Holmes and L. K. Peterson.

The meeting adjourned at 4.30 p.m.

At 7.30 p.m. the meeting regathered in the Burgundy Room of the Horse Shoe Inn for cocktails, banquet and social evening. The Guest Speaker, Dr. R. Glen of Ottawa, presented a very interesting speech entitled, "The Changing Scene". After dinner, members were given the opportunity of showing coloured slides taken on the field trips held this summer. Mr. C. E. Brown of the Calgary Forest Biology Laboratory showed a very interesting series of slides taken on a forest insect survey trip by boat down the McKenzie River this summer.

At 9.30 a.m. October 8th, Dr. H. Hurtig, President, called the second session of the Third Annual Meeting of the Entomological Society of Alberta to order.

The treasurer's report was given by Mr. W. W. Hopewell, who moved its adoption. Dr. B. Hocking seconded the motion which was passed unanimously.

Dr. C. W. Farstad, Chairman of the Resolutions Committee, presented the following resolutions to the meeting. Other members of the resolutions committee were Dr. G. E. Ball and Dr. W. C. McGuffin.

Whereas Mr. Kenneth Bowman, a noted amateur Lepidopterist, who passed away suddenly on September 25, 1955, was an honoured member of this Society -

Be it resolved that Professor Emeritus E. H. Strickland be requested to write an obituary on Mr. Bowman for publication in the Canadian Entomologist and that Professor B. Hocking be asked to do the same for publication in the Proceedings of the Entomological Society of Alberta.

Further be it resolved that the secretary be requested to write Mrs. K. Bowman, wife of our deceased member and express the condolences of the Society.

Whereas the Entomology Section, Suffield Experimental Station,



Ralston, has been a real force, both in the organization and activities of the Entomological Society of Alberta - We regret that work of this Section is being discontinued at Suffield. The activities of this group have been characterized by real enthusiasm in all phases of the work of the Entomological Society of Alberta.

Be it therefore resolved that we express our appreciation to the Head of the Section, Dr. H. Hurtig, and all the members of his staff for their many contributions to the fine spirit and welfare of the Entomological Society of Alberta.

Whereas the arrangements made by the President in securing Dr. R. Glen, Chief of the Division of Entomology, contributed much to the success of our annual meeting -

We resolve that a letter of appreciation be forwarded to Dr. Glen.

Whereas the work by the various local committees in encouraging junior activities in reviving an interest in amateur entomology is very commendable -

Be it resolved that we commend Dr. Brian Hocking for his leadership in the work and recommend the continuation and extension of this work throughout the Province.

Whereas the Third Annual Meeting of the Entomological Society of Alberta, now ending, has set a very high standard, the membership of the Society wish to thank all those who have contributed to making it so successful -

Therefore be it resolved that we extend our sincere thanks to the members of the Calgary committee, particularly Messrs. G. Hopping and R. Russell in arranging such excellent accommodation and entertainment for the Annual Meeting.

Be it further resolved that the Secretary write a letter to the management and staff of the Horse Shoe Inn commending them for their congenial and courteous service.

Be it further resolved that letters of appreciation be forwarded to the companies who made cash donations towards our annual meeting, and that a list of the contributors be included in the Proceedings of the Third Annual Meeting.

Dr. C. W. Farstad moved the adoption of these resolutions. The motion was seconded by Dr. W. C. McGuffin. Motion passed.

Dr. W. C. Farstad presented a special motion: Moved that the Chairman of the Resolutions Committee write a letter to the Chief Superintendent, Suffield Experimental Station, thanking him for the co-operation of the Station in the activities of the Entomological Society of Alberta.

The motion was seconded by Mr. N. D. Holmes. Motion passed.

It was moved by Dr. B. Hocking and seconded by Dr. G. Ball that: Dr. C. W. Farstad be authorized to present an invitation to the National Society to hold the 1957 Annual Meeting in Alberta. The motion passed.

In the report of the Committee on Common Names of Insects, Dr. G. Ball stated that common names of insects ought to come about as a matter of demand for them by the public. The name of Mr. W. Lobay was added to the standing list of names of the Committee on Common Names of Insects, as being a person who is in contact with farmers and should know the needs for common names.

The Nominating Committee consisting of Mr. L. A. Jacobson, Dr. B. Hocking and Mr. C. E. Brown, brought forward the following nominations:

President:	Mr. G. Hopping.
Vice-President:	Mr. W. A. LeMaistre.
Past-President:	Dr. H. Hurtig.
Secretary:	Mr. C. E. Brown.
Treasurer:	Dr. W. C. McGuffin.
Editor-Librarian:	Miss M. Cumming.
Director to National Society:	Dr. W. C. Farstad.
Directors:	Mr. R. Russell
	Mr. W. W. Hopewell.
	Dr. W. Haufe.

Dr. B. Hocking moved nominations cease. Motion seconded by Dr. G. Ball. The President, Dr. H. Hurtig, congratulated the new executive and wished them every success. He suggested that one project for the new executive to undertake would be the mounting in a suitable frame of the sheep skin listing the charter members.

At this time Dr. C. W. Farstad, Chairman of the Resolutions Committee brought forth another resolution, dealing with a recommendation to the National Society that the Constitution of the Canadian Entomological Society be revised to contain proper sections on aims, officers, membership, elections, expenditures and bylaws. The motion was seconded by Dr. R. Salt. Motion passed.

It was moved by Dr. B. Hocking and seconded by Mr. W. W. Hopewell that next year's annual meeting of the Entomological Society of Alberta be held after November 1st.

It was indicated that a late date for the meeting would be advantageous because the annual meeting of the National Society would be held in August in conjunction with the 10th International Congress of Entomology. It would also allow the insect collection competition to be judged at the annual meeting. Motion passed.

It was moved by Mr. S. MacDonald that the annual meeting in 1956 be held in Calgary. Seconded by Dr. W. C. McGuffin. Motion passed.

It was suggested by the President that a spring business meeting be considered to form committees on, and to discuss the matter of the invitation to hold the 1957 National Meeting in Alberta.

The second business session adjourned at 10.30 a.m.

At 10.45 a.m. the meeting reconvened under the chairmanship of Mr. R. D. McMullen for presentation of papers. The following papers were presented in order with an adjournment from 12.15 to 1.30 p.m. for lunch.

1. Notes on the Adelgidae in the Prairie Provinces, by M. Cumming.
2. Exhibit - Suffield Experimental Station.
3. Towards the Control of Warble Grubs in Cattle, Hypoderma lineata (De Villiers), and H. bovis (De Geer), by J. Weintraub.
4. Observations on the Genus Zacotus, Le Conte, 1869. (Coleoptera: Carabidae: Broscini), by G. E. Ball.
5. Notes on the Army Cutworm, Chorizogrotis auxiliaris, Grote, by L. A. Jacobson and P. E. Blakely.
6. Nutritional Studies on the Black Blow Fly, Phormia regina, Meig., by A. J. McGinnis.

The meeting adjourned at 4.00 p.m.

## INVITATIONAL PAPER

### "The Changing Scene"

Dr. Robert Glen  
Chief, Entomology Division,  
Science Service, Dept. of Agriculture,  
Ottawa, Ontario

The title, "The Changing Scene", may have led you to expect a discussion on topics that I shall not deal with, or at least not adequately. For example, under this title it would be appropriate for me to remind you, as members of an entomological society, that organized entomology in Canada was born in 1863 when a small group of amateur entomologists formed the first Entomological Society of Canada. In 1871 it was re-christened the Entomological Society of Ontario; and in 1950 it was reinstated as the Entomological Society of Canada. Today, it links in a professional commonwealth the seven autonomous regional societies of which the Entomological Society of Alberta is one. And perhaps you would expect me to recall that the dignified title of "Professor of Entomology" was first used in Canada in the 1890's at the Ontario Agricultural College. By contrast, today, formal courses in entomology are offered in about 18 universities and colleges with some 30 professors participating; that the M.Sc. degree in entomology can be obtained at 18 institutions while the Ph.D. with a major in entomology is now procurable at nine.

These might very well have been the topics that I should be speaking on, along with changes in extension practices, legislation, growth in the Entomology Division, organization for research, etc., etc. Alas, I am not thinking of these but of The Changing Scene that has been going on for centuries, yes, even eons before the Entomological Society of Canada was formed or the first dignified lecture in entomology was given. We live in an ordered and law-abiding universe, and if we are to understand the laws that govern the changing biological scene we must orient ourselves within something bigger than ourselves and establish to our own satisfactions certain working concepts. What we observe or what we do does not stand alone but in relation to other things. Furthermore, though I believe that insecticides and other direct protective measures are essential to our welfare, I also subscribe to the view that the long term objective in pest control must emphasize management in which chemicals will find their proper place. I do not apologize, therefore, for approaching the subject with a strong ecological bias.

I shall not attempt to be factual; just mildly philosophical and conceptual and shall deal mainly with those broad aspects of nature

within which we each take up our tiny tasks.

For a few minutes let us consider this universe of which we are a part; and may I begin by reading a brief paragraph from Sir James Jeans' book The Mysterious Universe (The MacMillan Co., New York, 1930, p. 12):

"If, however, we dismiss every trace of anthropomorphism from our minds, there remains no reason for supposing that the present laws (of Nature) were especially selected in order to produce life. They are just as likely, for instance, to have been selected in order to produce magnetism or radio-activity -- indeed more likely, since to all appearances physics plays an incomparably greater part in the universe than biology. Viewed from a strictly material standpoint, the utter insignificance of life would seem to go far towards dispelling any idea that it forms a special interest of the Great Architect of the universe".

Challenging words! Whether we agree or disagree, we might reduce the discussion to two basic questions: Can we conceive of a world without life? (Undoubtedly!). Can we conceive of a world without physical laws? (I think not). Then, I am prepared to accept the concept of dominance of the physical over the biotic aspects of nature. Indeed, in my opinion, this forms one of the four corner posts in the framework of our ecological thought. Perhaps we can derive the others.

Were Sir James with us, I am sure he would tell us that all matter consists of three basic particles: protons, neutrons, electrons; that these are variously combined into atoms, molecules, and objects; and that this is just as true of a rock as of a rabbit. In this basic way organic and inorganic objects are as one. But matter and energy, broadly speaking, are inter-convertible. Again we observe a basic unity in the universe between substance and force. Unity or the oneness quality is surely another corner post.

But this universe is as infinite in its variety as Shakespeare's Cleopatra. Such a variedness can be a unity only through the primary attribute of interrelatedness. I am sure that no plant or animal lives in total isolation.

The fourth corner post must surely be change. This certainly is not a static world. Indeed, the basic quality of change is well known to us through such phenomena as plant succession, evolution, and that innate plasticity that characterizes living organisms and permits them to adapt to circumstances, and that likewise prevents most pest control measures from being permanently effective.

These then, I suggest are the broad concepts on which we can erect our ecological thought: the dominance of the physical over the biotic, unity, interrelatedness, and continuous change.

Now, what do you include in your general concept of nature? Quite frankly I know of nothing that can be excluded, at least in the ecological sense. I regard as natural that which is sometimes termed artificial on the one hand and supernatural on the other. Let us take the easy points first. In any natural environment we readily perceive numerous physical attributes such as light, heat, moisture, and space; and several biotic factors such as plants, animals, and dare I say man? To me man is part of nature, modern man being a product of natural selection. It is relatively easy to think of primitive man as part of natural phenomena. However, modern man with his extensive development of cities, industries, transportation, etc., is harder to reconcile. But the difference is simply one of degree. In the ecological sense, man is a biotic factor and everything he does or creates must be termed natural and not artificial. Even when he applies insecticides, which he has refined directly or indirectly from natural resources, he is simply playing one part of his vital natural role in this ever-changing universe.

One might go further and ask: has Divine Providence designed the Universe? If you think so, then add spiritual factors to the forces that effect change. Such factors may be difficult to measure, but how can they be excluded if other intangibles such as instinct and psychological forces are accepted.

In what sense should we use the term balance of nature? We hear repeatedly that man is upsetting the balance of nature. This surely is nonsense! If man be of nature and if nature be balanced then that balance must exist regardless of man's actions. In other words, if a theory of balance is admissible, it must provide for all possible combinations of circumstance including such catastrophic elements as fire, hurricane, locusts, --- and man. If our concept does not include these things it is too narrow for adequate coverage of the broad term "nature".

"Balance" is occasionally used in the sense of equilibrium or steady state. To me that suggests a static condition at variance with our corner stone of change. Again, reference is frequently made to factors that keep a population of animals in balance. Certainly natural forces set upper limits to the abundance of a given species, but the term balance is inappropriate for individual populations that fluctuate widely and irregularly. Therefore, I feel that the quality of balance belongs not to specific populations but to multifaceted ecological systems. Perhaps, my views on this question will be clarified by quoting from a passage in my paper on Factors that Affect Insect Abundance (Jour. Econ. Ent. 47: 3, p. 400):

"...a broad type of balance or order in nature is obvious. It is not balance in the sense of equilibrium but rather as a changing state of order that results from the coexistence of interdependent forces that individually may vary, undergo modification, be added to, or be totally removed in the course of events. Hence, the expression "balance of nature" probably should be taken simply as a shorter way of saying: The ecosystem is whole; it functions as a complex of dynamic subsystems with an interdependence of parts that controls and directs all relationships; none of its components is constant, but their interrelations are such that excessive variation by any of them is ultimately checked by others, thus producing an elastic state of balance within which a state of flux prevails. In this sense, the ecosystem is always balanced though its constituent populations may fluctuate widely".

What is the basic taxonomic unit or entity in animal communities? Usually, it appears to be of a subspecific order. More and more we are discovering bio-types or races or strains within species, especially within those species of wide distribution and of marked adaptability. This, in my opinion, is rapidly being recognized as one of the most significant features of present day entomology. We have numerous examples of differences in tolerance, in life-history, and in sex-ratio between populations in different parts of the range of a given species. But the economic entomologist must deal with the population confronting him in his locality. He is primarily concerned with the characteristics of local populations, whereas the systematist has, until recently, thought mainly of the species as a whole. Today we are awakening to the need for understanding the species through a knowledge of its component bio-types. Admittedly, this might be more difficult than is at first conceived. Is it possible, for example, for two populations of the same species to behave differently even though they are not genetically distinct? Undoubtedly! Likewise, is it possible for such populations to differ genetically? Again, undoubtedly! Perhaps a local example will suffice. Two days ago I talked to Mr. Lloyd Peterson at Lethbridge about a problem that he is about to study. As you know, the alfalfa weevil was discovered in considerable numbers in southern Alberta in 1954. Some years ago W. C. Cook examined the temperature tolerances of this species and concluded that it could not survive north of the State of Montana. The question is: By what means has such survival become possible? Assuming that Dr. Cook's analysis was accurately performed, three lines of reasoning remain: (1) the weather in southern Alberta may have become less arduous or the protective niches may have increased through changes in cropping practice and thus reduced the harmful effects of weather; (2) mutation and natural selection may have made possible the recent development of a tougher strain; or (3) without a change in genetic complement, opportunity may have been provided for the essential "conditioning" or "acclimation" that would produce hardier beetles and thus permit survival under Canadian winter conditions.

There are many problems of this type demanding attention. I hope that before long we can increase our investigation of them that we might properly characterize the subspecies which are, I feel, our basic ecological and economic units.

In conclusion I should like to leave one further concept: That we cannot successfully invade new fields of investigation until preceding fields of study have matured sufficiently to make the new development possible. To illustrate, let me quote from H. A. Overstreet's book The Mature Mind (W. W. Norton & Co., New York, 1949, pp. 1 - 2):

".....the attitude toward human nature and human experience that has come in our time is new.

"This attitude could not have come earlier. Before it came, there had to be long preparation. Physiology had to be a developed science; for the psychological person is also physiological. ...But before physiology there had to be a developed science of biology...

"But before biology there had to be chemistry; and before chemistry, physics; and before physics, mathematics. So the long preparation goes back into the centuries.

"There is, in short, a time clock of science. Each science has to wait until its hour strikes.....

"Each science has to wait for its peculiar accuracy until its predecessor has supplied the data and tools out of which its accuracy can be made".

And so it is with all of us in our attempts to unravel the secrets of nature. We must develop guiding hypotheses and concepts somewhat in advance of procuring factual information; but we must also take care not to outrun "the time clock of science" in our endeavours to understand the ever-changing scene.



JOINT REPORT

Highlights of Insect Occurrences and Abundance in Alberta - 1955

by

Field Crops Insect Pests Laboratory, Lethbridge.  
Livestock Insect Pests Laboratory, Lethbridge.  
Forest Insect Pests Laboratory, Calgary.  
Entomology Department, University of Alberta.  
Field Crops Branch, Alberta Department of Agriculture.

A comprehensive report on the outstanding insect occurrences reported during the 1955 season, was given by personnel from the above mentioned organizations. The report covered most of the main agricultural insect pests and several insects affecting human health as well as a few of academic interest.

SUMMARIES OF PAPERS PRESENTED

Sheep Ked Population Cycles

W. A. Nelson  
Livestock Insect Laboratory  
Lethbridge, Alberta

Last year at this meeting, evidence was presented to show that ked populations in ewes rise and fall with onset and termination of oestrus, and that the state of pregnancy in the ewe prolongs high populations of keds until after parturition. Herewith are presented curves showing the behavior of populations on five physiological categories of host: rams, pregnant and barren ewes, and castrates of both sexes. All groups of sheep showed ked increases until about the last two weeks in February. Thereafter all groups showed a decline in population except in the case of rams, whose decline commenced about a month late. Ram populations maintained a rather constant and relatively high population throughout the summer, whereas populations on all other groups fell below five. Minor differences in curve characteristics were discussed.

It is suggested that two host factors are operating in the build-up and maintenance of ked populations. The first is common to all groups, while the second is produced by the testis and possibly by the placenta. In rams the combination of the two factors results in higher populations

### Sheep Ked Population Cycles (Cont'd)

during the peak period; the disappearance of the first factor leaves rams with a decreased, but still relatively high population which is maintained throughout the summer months. It is suggested also that the first factor may be produced by the adrenal cortex. The second factor is probably not testosterone or progesterone, as was earlier thought.

It has also been confirmed that the immediate cause of death in keds during the period of population decline is an obstruction of the posterior midgut by masses of Trypanosoma melophagi (Flu).

### Freezing and Melting Points of Insect Tissues

R. W. Salt  
Field Crops Insect Laboratory  
Lethbridge, Alberta

The various tissues of two species of insects, one cold-hardy and the other not, were found to have melting points between  $-0.5^{\circ}$  and  $-1.00^{\circ}\text{C}$ . Because of this uniformity, the relationship between temperature and extent of ice formation, quantitatively worked out for blood of Loxostege sticticalis (L.) in a previous paper, may be considered representative of insect tissues in general, except possibly those of insects that withstand freezing.

### Recent Observations on the Hessian Fly, *Phytophaga destructor* (Say) in Southern Alberta

N. D. Holmes and L. K. Peterson  
Field Crops Insect Laboratory  
Lethbridge, Alberta

This paper reported on several closely observed outbreaks of hessian fly damage in south-western Alberta. The observations agreed with Strickland's report that a partial second generation emerges in July.

A field plot test near Lethbridge gave some evidence that Red Bobs wheat is either unattractive for oviposition or possesses

Recent Observations on the Hessian Fly (Cont'd)

some resistance to the hessian fly.

Observations pointed out that it is quite possible that hessian fly in Alberta is more prevalent than formerly realized. In most cases where infestation is moderate, lack of easily observable signs of plant damage would give no indication of the presence of this pest.

Notes on the Adelgidae in the Prairie Provinces

M. Cumming  
Forest Insect Laboratory  
Calgary, Alberta

Five species of Adelgid galls have been identified from material submitted to the Forest Insect Survey. These are: Chermes lariciatus (Patch), Chermes cooleyi (Gill), Chermes strobilobius (Kltb.), Pineus pinifoliae (Fitch), Pineus similis Gill. ? The life cycles of some of the species are still unknown and some of the stages have never been described. Only fragmentary information about the alternate generations of these adelgids has been obtained from survey collections. In 1955 Adelges cooleyi (Gill.) was studied at the Kananaskis Forest Experiment Station. Notes were given on hosts, distribution, and life histories.

EXHIBIT

Development of Aircraft Insecticide Application at  
Suffield Experimental Station

H. Hurtig  
Suffield Experimental Station  
Ralston, Alberta

Toward the Control of Warble Grubs of Cattle, *Hypoderma*  
*lineatum* de Villiers and *Hypoderma bovis* Degeer

J. Weintraub  
Livestock Insect Laboratory  
Lethbridge, Alberta

Problems in attaining control of and evaluating damage caused by warble grubs in cattle are discussed.

The core of these problems seems to be our ignorance of the hidden grub infestations within the cattle, and our inability to obtain sufficiently uniform populations for comparing chemical control measures.

Solution of these central problems resolve themselves into a means of infesting known cattle with known populations of warble grubs through a study of mating and oviposition habits of the adult flies.

The progress made in this direction at the Livestock Insects Section, Science Service Laboratory, Lethbridge, is outlined. Methods of mating reared flies practically at will, and of artificially infesting calves with known numbers of eggs are here described. Both of these techniques utilize the flight habits of the adult flies.

Observations on the Genus *Zacotus* Le Conte, 1869  
(Coleoptera: Carabidae: Broscini).

George E. Ball  
University of Alberta  
Edmonton, Alberta

The genus *Zacotus* is represented by the single species *Z. matthewsii* Le Conte, which is restricted in its distribution to northwestern North America. Geographical variation of this species is discussed, and it is shown that the specimens east of the coast range are distinct from those on Vancouver Island, but that specimens from the coastal area are structurally intermediate between the geographically and morphologically extreme forms.

Relationships of *Zacotus* to other carabid genera are discussed. It is shown that this genus possesses all of the characters of the tribe Broscini, and therefore there is no justification for

placing it in a separate tribe, the Zacotini, as is done by certain other workers. It is shown that Jeannel's classification of the tribe Broscini is not altogether satisfactory.

A hypothesis to account for the present day distribution of the Broscini is presented.

Notes on the Army Cutworm, *Chorizogrotis auxiliaris*, Grote

L. A. Jacobson and P. E. Blakely  
Field Crops Insect Laboratory  
Lethbridge, Alberta

Details of rearing this field crop pest were given in this paper. The discovery of a method of duplicating the aestivation period that occurs in the field made it possible to secure eggs from the army cutworm and rear all stages successfully, thus providing another experimental insect for studies on the ecology and physiology of Noctuid species.

Nutritional Studies on the Black Blowfly, *Phormia regina* (Meig.)

A. J. McGinnis  
Field Crops Insect Laboratory  
Lethbridge, Alberta

A chemically defined diet was prepared which permitted development from egg to adult under aseptic conditions. Some implications of these results in nutritional studies of other insect species were discussed.

ENTOMOLOGICAL SOCIETY OF ALBERTA  
INSECT COLLECTION COMPETITION, 1955

B. Hocking

Ten entries were received, four from Edmonton, two from Calgary, one from Lethbridge, two from Manyberries, and one from Spring Coulee. Although this was fewer than last year, the standard was definitely higher, more entrants used proper insect pins, and more of them included series of specimens instead of single specimens of each species. Arrangement into groups was better. Labels were still much too large on most specimens, and specimens were often too low on the pins.

Judging was done by Mr. R. L. Anderson, Dr. G. E. Ball, and Dr. B. Hocking at the Department of Entomology, University of Alberta. The prize winners in the senior group were:

1. Donna Mae Nattrass, Manyberries, Alberta.
2. Joy Molyneux, 1124 - 9 Street East, Calgary, Alberta.
3. Hilary Anderberg, 927 - 7 Avenue West, Calgary, Alberta.

and in the junior group:

1. Wayne Nattrass, Manyberries, Alberta.
- 2 & 3 (Kenneth Elmer Beswick, Spring Coulee, Alberta.  
(D. Clinton Walker, 11224 - 87 Avenue, Edmonton, Alberta.

Both of the first prize winners took prizes last year. In their entries this year there were nearly three hundred specimens. The collection submitted by Donna Mae Nattrass contained specimens representing 106 species, 48 families, and 8 orders of insects, and included a second specimen of the beetle of which she took the first Albertan specimen last year. Other interesting specimens included a Cecropia moth, Parnassius and swallow-tail butterflies, an ant-lion larva from Manyberries and ant-lion adults from north of Edmonton.

OBITUARY

Kenneth Bowman, 1875 - 1955

It was with deep regret that the Society learned of the death of Mr. Kenneth Bowman in Edmonton on September 25, 1955.

Mr. Bowman collected his first Lepidoptera in Alberta in 1904; on January 1, 1955 he collected, off his Christmas tree, another new record for Alberta. For over 50 years his spare time was devoted to painstaking collection and to the meticulous care which he gave his specimens. If the Society can raise one amateur to emulate him in a generation it will serve its purpose well.

Note: Mr. Bowman's excellent collection of Lepidoptera has been bequeathed to the University of Alberta.

Balance from 1954.....		146.43
Membership fees		
Alta. Ent. Soc. 1955.....	38.00	
Alta. Ent. Soc. 1956.....	<u>54.00</u>	92.00
Can. Ent. Soc. 1955.....	44.00	
Can. Ent. Soc. 1956.....	<u>48.00</u>	92.00
Donation.....		25.00
Surplus from Annual Meeting.....		30.62
Bank Interest.....	<u>1.61</u>	<u>241.23</u>
		387.66

Membership fees to Can. Ent. Soc.		
for 1955.....	44.00	
1956.....	<u>48.00</u>	92.00
University of Alta. Prize.....	50.00	
Stationery.....	15.10	
Covers, Collectors' Manual.....	33.15	
CPX                   "                   " .....	4.45	
Book binding tape.....	12.55	
Flowers.....	10.15	
Postage.....	18.09	
Exchange on cheques.....	1.83	
Telegram.....	1.59	
Bank service charge.....	<u>.50</u>	239.41
Bank balance 16 January, 1956		<u>148.25</u>
		387.66

(Sgd.) W. L. Clink  
(Sgd.) Reid Johnston



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December 31, 1955

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Mann, S. L. W., Special Weapons, D.R.B. Hq., Ottawa.  
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Wright, B., Mercoal, Alta. (F/C-RCAP Stn., Centralia, Ont. (Temp. ad.)  
Wyatt, C. W., Box 217, Banff.  
van Veen, N. W., 10968 - 95 Street, Edmonton.

Special Note: Strickland E. H. (Prof.) - Honorary Life Member.

### ACKNOWLEDGMENTS

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The Dupont Company of Canada.

Oliver Chemical Company.

Wilson's Seed Store, Calgary.

Niagara Brand Spray Company.