

Annual Report, 1917 ALBERTA NATURAL HISTORY SOCIETY

REPORT OF THE Natural History Society, November, 1917.

Sir, - I beg to submit herewith report of the Alberta Natural History Society for the year 1917 :

In spite of many calls upon the leisure time of our members, for patriotic or charitable work arising out of the war, the aims of our Society, we are pleased to state, have not been neglected during the past year. We can, in fact, review the endeavours of our members individually, and our Society as a whole, with a considerable degree of satisfaction.

At the suggestion of members devoting their attention to botany an Herbarium was purchased out of funds of the Society early in the year, and installed in the Public Library room in the City Hall. The case was made to order, and the adjustable shelving makes practicable the correct arrangement of specimens within the least possible space. It is hoped in due course, by means of donations by our members, and also specimens specially gathered and preserved for the purpose, to build up a representative properly named collection of flora of the Red Deer District, available for reference or study.

In response to the representations made by Mrs. G. F. Root at the last Annual Meeting, that suitable material for study and instruction was much needed for circulation among the country schools, the President, Mr. Whitehouse, undertook to prepare a case each of butterflies and dragonflies. These were duly forwarded to Mrs. Root in the spring, with a paper accompanying each, giving the names of the specimens enclosed, and such additional information as was deemed desirable. Mrs. Root prepared an itinerary whereby the cases should pass from school to school at regular intervals; and since no special knowledge is required by the teachers in order to convey to the pupils the natural history instruction contained in the papers, the scheme certainly suggests great educational possibilities.

A noticeable increase of interest in natural history study on the part of the boys and girls of Red Deer has come about during the past year. Unquestionably this has largely been due to the praiseworthy encouragement of two local teachers- Miss Cole and Miss Goudie. Other members of our Society have ably seconded the good work by example and instruction, in which connection Mrs. W. A. Cassels' lecture on "Bird Life" to the High School pupils should have honourable mention.

In view of the increase in interest this Summer as above referred to, our Society will again next year consider a suitable prize list to be given for collections and papers exhibited at the local Fair, by school boys and girls of the district.

At the request of Mr. M. O. Nelson, Inspector of Schools for the Wetaskiwin District, our Society donated \$10 toward the prize list of the School Fair held in Wetaskiwin. The funds were used in providing prizes for the following classes: Collection of insects; collection of weed seeds; collection of weeds. It is gratifying to learn that "the exhibits were well selected, tastefully arranged, and showed careful work on the part of both teachers and pupils."

The City Librarian reports that on library nights the two fine cases of butterflies and moths, the property of our Society installed in the City Hall, continue to interest the Public, particularly of course, the young people. By means of these cases, virtually all local butterflies, and many of the commoner moths, can be identified.

To stimulate the interest of the farming community in economic botany and entomology is one of the avowed objects of our Society. Along these lines various articles have been published by members in the public press, and in the Summer the President gave a paper, by invitation, before the Bowell Union of the United Farmers of Alberta, entitled "Insect Pests affecting Grain Crops, Gardens and Trees."

Since a full list of the natural history papers, read at the monthly meetings of our Society, is given in the Secretary's Report, it is unnecessary to detail them here. It might be mentioned, however, that Alberta butterflies and moths, dragonflies, flowers, birds and fishes have all been dealt with, while the four-footed animals have not been neglected in the general discussions.

The activities of our Edmonton members. Messrs. F. S. Carr, K. Bowman and D. Mackie, continue unabated. While all specialize in entomology, the former studies the order Coleoptera (beetles) particularly, and the latter two the order Lepidoptera (butterflies and moths).

Insects of extraordinary interest, on account of their being new records for the Province or of extreme rarity, collected by our members, are, from year to year, advised to Mr. Arthur Gibson, Assistant Dominion Entomologist, and are duly recorded by him in the "Entomological Record" in the Annual Report of the Entomological Society of Ontario.

In the "Canadian Entomologist" of March last, there appeared a paper by Mr. Whitehouse on "The Odonata (Dragonflies) of the Red Deer district." A supplementary list of dragonflies, taken by him this year, will appear in the same magazine shortly; also an account of his camping-collecting trip at Nordegg last July with Mr. Bowman, written in popular style.

During the past few months Mr. K. Bowman, one of the enthusiastic Edmonton members of our Society already mentioned, has been compiling the draft of a check-list of the Alberta butterflies and moths. His list will include all known provincial records right up to date, and will give the localities in which the various insects have been taken. The names will be in accordance with the recent revision of the order, by the noted authorities, Messrs. Barnes and McDunnough of Decatur, Ill. The publication of Mr. Bowman's provincial list would provide most useful information, not only to Alberta students, but to collectors and systematists in other parts of Canada and the United States. The practicability of putting the list into print will come under consideration by our Society in the near future.

Our Society again records its appreciation of the sympathetic assistance received from the Provincial Government, which is fully alive to the importance of keeping abreast with the sister provinces in the encouragement of nature study, and its various economic phases. The establishment of a Provincial Collection of insects, it is understood, is in contemplation. This would command the individual support and assistance of every naturalist in Alberta, and the very strong commendation of our Society.

ENTOMOLOGICAL REPORT. 1917.

By F. C. Whitehouse.

For the fourth year I beg to submit an entomological report for the period since the last Annual Meeting.

INSECT PESTS.

The Forest Tent Caterpillar (*Malacosoma disstria*). — This pest has again been troublesome in the Red Deer district. Upon the north side of Sylvan Lake, where last year the white poplars, balsam and birch were completely denuded of leaves, considerably less damage was done. Back from the lake front, however, the leaves on the smaller growth of trees were badly eaten off. Due to my representations concerning the outbreak to the Dominion Entomologist, a member of his staff, Mr. J. D. Tothill, temporarily located in British Columbia, made three trips to Red Deer and Sylvan Lake. It is possible that an attempt will be made to introduce into this district certain insects, parasitic upon Tent caterpillars in the hopes of checking the outbreak. The most important natural control in this district at present is frost, which when it occurs in the very early days in the lives of the caterpillars, will kill them off.

The Colorado potato beetle, (*Leptinotarsa decemlineata*). a pest commonly known as the "Potato Bug." has been known to occur for some years in the southern portion of the Province. This year it caused some consternation by appearing in Calgary, and I regret to state there have been two instances this year of it being found at Red Deer. One of these was on a farm east, and one inside the City. Where the Potato bug occurs in abundance the spraying of the plants with Paris green is an absolute necessity in order to ensure a crop. As a matter of fact the far-reaching benefits of economic entomology as they exist today are largely the outcome of the fight forced upon mankind by the advent of the Potato bug. Whether climatic conditions in central and northern Alberta will permit this serious pest to establish itself in the future alone will show. The beetle hibernates in the adult stage and, snug in the soil beneath a good covering of snow, can defy any temperature. Insufficiently protected by snow, however, it cannot winter; and possibly our early spring weather when severe frosts occur, after a welcome chinook has cleared the ground of snow, may prove its destruction.

The cabbage maggot and cutworm pests caused some damage and annoyance throughout the district as is their wont. So far as I have been able to discover, however, they were rather less to the fore than usually as the case.

Throughout the Red Deer district no instances have come to my attention of insect pests causing damage to cereal crops. This has not been altogether the case in other parts of the Province, and knowing this, it occurred to me about a month ago to obtain reliable information covering insect-pest outbreaks for the whole Province, and thus broaden the nature of my report as of former years, and I hope greatly enhance its value.

The following data were obtained from Mr. Arthur Gibson, Chief Assistant Entomologist, Ottawa, and I desire to record my appreciation and thanks for his courtesy.

ATTACKING GROWING GRAIN.

Grasshoppers.- Several complaints were received through Mr. W.H.Fairfield, Experimental Farm. Lethbridge, that these insects w[^]re destructive in certain localities immediately southeast of Lethbridge. No specimens were secured.

The Grain Aphis (*Macrosiphum granarium*). - Reports were received of the presence of these insects from a few localities. The injury, however, was not serious.

The Western Wheat Stem Sawfly (*Cephus occidentalis*) was rather widespread in certain prairie districts, and considerable damage in places was effected in Saskatchewan. We have no definite records of the insect occurring in 1917 in Alberta.

The Wheat Midge (*Diplosis tritici*) - A single report, which we think refers to the work of this insect, 'Was received from North Foil Alberta and related to its presence on Prelude wheat.

ATTACKING GARDENS.

The Cabbage Maggot, "*Phorbia brassicae*." caused considerable damage to cabbages, radishes and cauliflower. It was reported particularly from the Edmonton district.

The Imported Onion Maggot, "*Hylemyia antiqua*." effected important injury to onions, being complained of especially from Keepphills and Edmonton. The Western Blister Beetle, "*Cantharis nuttalli*," was reported from Stavely doing injury to beans.

The Red Turnip Beetle, "*Entomocles adonidis*," was complained of from several localities; cabbages, turnips and radishes were badly attacked. Odonata (Dragonflies). - At the last Annual Meeting I read a paper dealing with the twenty-seven varieties of dragonflies that I had taken up to this time in this district. During the past year I have added eight species to my list, and since most of these are of extreme rarity it would he well to record them here, viz:

Nehalennia Irene Hagen.
Coenagrion interrogatunr Selys.
Soniatochlora albicincta Burmeister.
Somalochlora cingulata Selys.
Soniatochlora franklini Selys.
Somatochlora minor Calvert.
Somatoclilora semicircularis Selys.
Somatochlora septentrionalis Hagen.

Excepting the first mentioned, all were captured at Nordegg between July 11 and July 15, and with two exceptions, viz: *S. albicincta* and *S. semicircularis*. all are new records for the Province of Alberta.

Lcpidoptera (butterflies and moths). Coleoptera (beetles). - As stated in the Executive Report, there has been considerable activity on the part of our members during the past year in the study of these orders. In view of the fact, however, that all insects of special interest captured, are being systematically recorded year by year in the "Entomological Record," with, the names of the collectors, there is no need to duplicate the in'ormation here. I mention the "Entomological Record" as a reference to future students in this Province, and I desire to emphasize the fact particularly that Alberta, as a field for entomological study, is still a rich and virgin paradise. The

recorded data regarding the more popular orders are but partial at best, in the case of others, the work is virtually untouched.

SECRETARY-TREASURER'S REPORT.

Seven monthly meetings .were held during the year, with an average attendance of ten members.

During the year the following papers were read: -

March 2S. - Insect Pests; Mr. Whitehouse.

April 25. - Water-birds at Sylvan Lake; Mrs. W. A. Cassels. Birds of Alberta; Dr. H. George.

May 30. - Fishes of Alberta and Adjacent Waters; Mr. Whitehouse.

September 26. - Dragonflies; Mr. Whitehouse.

October 26. - Nature-study in Schools, its Difficulties; Miss M. Cole.

It was decided to suspend the ordinary meetings during the summer months. June. July and August. There was no Field Day this year, as it was found difficult to arrange an outing.

At the request of Mr. M. O. Nelson. Inspector o' Schools, Wetaskiwin, this Society made a donation of \$10 for prizes to be awarded at the School Fair, for Natural History Collections. The money was distributed as follows: -

A. COLLECTION OF ALBERTA INSECTS.

1st prize, \$1.25, Star S.D., Miss Minnie Ringwall, teacher.

2nd prize, \$1.00, Pleasant Prairie S.D., John North, teacher.

B. COLLECTION OF AVEED SEEDS.

1st prize, \$1.50, Weiler S: D.. Miss Lillian Bailey, teacher,

ind prize. \$1.25. Haultain S.D., Miss Nellie James, teacher.

.;rd prize. \$1,00, Crooked Lake S.D., Miss B. Luther, teacher.

C. COLLECTION OF WEEDS OF ALBERTA.

1st prize. \$1.75, Cherry Grove S.D., Miss Mabel Poole, teacher.

2nd prize, \$1.25, Nashville S.D.. Miss Ruby Schnare, teacher.

:!rd prize. \$1.00, August Ridge S.D., Miss M. Creighton, teacher.

.New members during the year, are Mr. K. Bowman, Mr. D. Mackie. Mr. S. Carr, Mr. and Mrs. Stickle, Miss Goudie and Rev. G. N. Finn. There are 36 names on our membership roll. This number, of course, does not include the Innisfail and Erskine branches.

Financial Statement, November. 1916. to November, 1917.

Balance at bank \$169.94

Government grant

Members' subscriptions

Salary, Mr. Horsburgh .

Salary, Miss Fyson

Prizes, Wetaskiwin Fair

Herbarium Cabinet

Printing, Advertising . .

Postage, etc-

Typing

Livery

Balance at bank \$274.19

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