

REPORT FROM THE KOOTENAY.

Mr. Chairman and Members of the British Columbia Entomological Society:—The honor has fallen to my lot to report on the insects of the Kootenay districts in the place of my friend, Mr. J. W. Cockle, of Kaslo. I am very sorry Mr. Cockle found it impossible to attend the meeting as I am sure he would have had a much more interesting report to present to you than any which I could give. My work, however, as District Horticulturist brings me in very direct contact with the injurious insects or those found in the orchards. With the comparatively short time I have had to prepare anything, my report must of necessity deal particularly with those economic insects which have come under my notice during the past year. I might state in the beginning that our list of injurious insects is very small indeed, so that my task will be comparatively small also. We cannot, however, expect to be able to report this state of affairs for all time for, wherever we have a district adapted to the culture of fruits we are always liable to have it visited sooner or later by most of the serious insect pests with which fruitgrowers in other districts and other countries are troubled. Fortunately we have at the head of our Provincial Inspection branch at Vancouver our old and esteemed friend, Mr. Cunningham, who is always upon the look out for insects entering the Province through the agency of imported nursery stock, fresh fruits, etc. This with your energetic Secretary, Mr. Treherne, for the Dominion, and Mr. W. H. Brittain of the Provincial Staff, along with your President, the Dominion Inspector of Orchards for the Province, and all these gentlemen augmented to a certain extent by the local horticulturists stationed throughout the Province, should in a very thorough way protect our orchards against the ravages of our present pests and the entrance of any new ones.

Possibly our worst insect pest is the Common Green Aphis (*A mali*). They came in numbers very early in the spring, but did not spread or multiply so rapidly as in previous years, consequently for this reason were less troublesome than in former years. We have the Apple, Plum and Cherry Aphis. The Woolly Aphis (*Eriosoma (Schizoneura) lanigera*) fortunately has not made its appearance in the Kootenays to my knowledge.

In our spraying experiment for the Green Aphis we came to the conclusion that the lime and sulphur mixture had very little effect in destroying the eggs on the branches. Last year the Aphis were hatching out and spreading over the branches, which were yellow with the lime and sulphur. Applications of Black Leaf 1-70 gave excellent results where thoroughly applied. The newer mixture, Black Leaf 40, gave very varying and more or less unsatisfactory results with us. I believe this is a

contrary finding to experience with the two mixtures in other districts, so perhaps, while stating our experience, it would be well to try further experiments.

The Green Fruit Worm was quite noticeable in some of the orchards, particularly those located near timber. These came on and did their damage before the thinning of the fruit was completed so that by a little care in thinning all the punctured or bored apples were removed. No spraying was deemed necessary for these insects.

The Leaf Miner (*Tischeria*) was quite noticeable in the orchards near the timber line. These usually do so little damage that no means of control are practiced.

The Cicada, or called locally the Salmon Fly, did quite a lot of damage to the young trees along the Columbia River by laying its eggs in slits made in the young shoots, many of these shoots snapping off later in the wind.

The Climbing Cutworms were exceptionally troublesome this last year. I have taken as many as 60 around one small tree. This was brought about by an intercrop of clover having been plowed under in the spring and the worms gathered around the small trees. In many instances every single bud was eaten off the trees. Poisoned bait was tried of the usual strength, viz.: 100 lbs. Bran, 1 lb. Paris Green, and 2 lbs. of sugar. No results were obtained. We next applied a stronger and sweeter mixture with good results, viz.: 50 lbs. Bran, 1 lb. of Paris Green and 3 lbs. of sugar. This seemed to be more palatable and the worms preferred it to the buds of the trees, for on the following morning after application dozens of dead worms were to be found around each tree. The mixture should be applied fairly dry and crumbly and should be sweetened according to the plants upon which the larvae are feeding.

While on the subject of Paris Green baits for Cutworms it might be well to sound a brief warning on the likely effect this bait will have on young and tender plant growth. This last season has shown us that the bait applied too close to the trunk, in fact, touching the trunk, is liable to cause a girdling effect on the plant tissues. In a number of cases this last summer our young trees were completely girdled from no other cause than Paris Green injury. The larger trees do not suffer in the same way, but it is reasonable to suppose that some evil results when applied too close to matured wood.

The California Tortoiseshell (*Vanessa californica*) was found working in great numbers on the *Ceanothus*. They were particularly abundant along the Columbia, Slovan and Kettle River sections. Many fruit growers became alarmed at the outbreak, at the numbers and at their ravages. However, as they kept to their own plant food and did not

affect any cultivated tree, there was no harm done. I believe this insect must have been very heavily parasitised, for I was led to believe that a second brood or a second emergence of caterpillars would appear in the latter part of the summer. Very few appeared, however.

As I said previously we in the Kootenays are particularly blessed with but few insect pests, in fact no serious pests, at present, consequently I hope these rambling notes will be acceptable to the members of the Society for their records on the district which I have the honor to represent.

M. S. MIDDLETON,
Nelson, B. C.

MR. CHAIRMAN—Having received these very interesting and valuable reports from the districts, we will proceed with the next item on the programme. I will now call on the Secretary for his correspondence for the year and his Financial Statement.

MR. SECRETARY—Re Financial Assistance;
Care Inspector of Fruit Pests, Court House,
Vancouver, November 6th, 1912.
The Honorable
The Minister of Agriculture,
Victoria, B. C.

SIR,—

On behalf of the members of the British Columbia Entomological Society, of which I have the honour to represent as Secretary for the present year, I beg respectfully to address this letter to you for your consideration.

The Society now known as the British Columbia Entomological Society was formed in the year 1901, with a membership of about ten individuals. During the course of its active career as a Society following the year 1901, I am given to understand that a quarterly grant of \$25.00 or \$100.00 annually was allowed at the hands of the Provincial Department of Agriculture through the kindness of the Minister of Agriculture. During the past few years interest in the Society gradually waned owing to the fact that the Secretary, Mr. R. V. Harvey, left Vancouver, the Society's headquarters, and also owing to the severe illness and ultimate death of the President, Rev. G. W. Taylor, of the Biological Station at Departure Bay. I, on my part, have endeavored to reorganize the Society, with the result that a very successful meeting was held on December 9th, 1911, in Vancouver, with a paid-up membership of twenty-four individuals. I am glad to say that the membership during the past year has increased to nearly forty; consequently I feel safe in saying that the Society bids fair to remain as a Society in the Province and hopes to become, as years go on, an economic factor in the practical economic control of insect pests in the Province.

The objects and the endeavors of the Society are somewhat as follows:

To co-ordinate the work of those engaged in Entomological pursuits in the Province of British Columbia.

To assist and promote the study of Entomology in the Province of British Columbia.