

Prof. FLETCHER: Yes, I think it might be a good suggestion, for this reason: The plum curculio is about before the leaves open, and it has also been found, in confinement, to eat not only the young leaves before they open fully, but also the young bark and the young twigs; and therefore if the poison could be made to act on the parent beetle it would be a good remedy; but we do not know exactly what is the effect of this treatment. We do not know if the insect is poisoned by eating the leaves, or whether the females are prevented from visiting sprayed trees. I think there is no more representative body in Canada than this to which we can appeal as to the value of such remedies. We should have a sufficient number in this room who have either failed or succeeded in their use to settle this question at once. For my own part, I cannot think of a discovery more important to fruit-growers than the discovery of these methods of spraying trees. In a large collection of different plants you will find some varieties or species in the genus are attacked by insects while others are left untouched. That points to the fact that some are injured more than others. I think that some of the failures may have arisen from the fact that some plum trees are more susceptible to the attacks of the insect, or the insect is more attracted to them; and where the very decided reports of success have followed, it may be that the insect is not so much attracted. All this could be checked in a series of experiments carried on for two or three years. There are one or two insects that have not appeared at all this year, where they were very destructive before, and that brings me back to speak about the grasshoppers. We know that all insects that appear in very large numbers are attacked by their own parasites. It is supposed that every insect known has its own special parasites, and sometimes these themselves are attacked by parasites. Some of these parasites are described from the actual insect from which they are bred. When grasshoppers are abundant, you will find many of them that have red mites on them; these are parasites which are feeding on the insect and destroying a large number of them. Again, there are parasites which live inside of them. Sometimes, in crushing a grasshopper, you will see a large white maggot, like a meat maggot. This is one of the tachina flies which are very active in destroying the grasshoppers. The egg is laid on the skin of the grasshopper after hatching. It eats its way inside, and lives upon the juices of the body until it is full grown; it then emerges and after a time turns to a fly. Many of these insects are destroyed by the gordius worms, which may sometimes be seen in water swimming and look like a piece of horse-hair. It is supposed by the ignorant that horse-hairs thrown in water will turn to these worms. It is nothing of the sort. These are parasites which have lived in insects, and then got into the water, where the eggs are laid, and then they enter the insects again in some of their preparatory stages, and live inside them as parasites. Speaking of insects which were not so abundant as usual, the white cabbage butterfly, which is usually so abundant at Ottawa, was noticeably absent this year. We usually have to sprinkle our cabbages two or three times a year with pyrethrum powder; this year it was hardly necessary at all. This year one of the worst pests was the root-maggot. We found this might be controlled with sufficient success to make it pay by mixing hellebore with water and putting it around the roots. Some experiments were made with salt, and these pointed certainly to success; but in some experiments I tried the results were so contradictory that they will have to be tried again before any definite statement can be made about them. One insect which I should like to ask St. Catharines or any western fruit-growers about, is the peach-bark beetle—a very small beetle. I found it very abundant last spring at St. Catharines. It was a very wet day, and the gum which had exuded from the bark in some of the peach orchards could have been scraped off in handfuls. On minute examination I found it was the beetle that had been boring in the bark. I doubt if it enters the wood at all; but it was an injury to the tree to have the bark injured to the extent it was then. I should like to know if any of these gentlemen have tried any alkaline washes. With regard to borers, it is known that the best measures are preventive; for successful treatment it is necessary to find the time the beetle is abroad and lays its eggs on the tree. This would probably, with this insect, be in June. As we have no peach trees growing at Ottawa, I have not the opportunity to test washes on the bark, but I presume any of the well known alkaline washes or kerosene emulsion would be satisfactory.

The SECRETARY: Tell us what the insect is like.

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