

where one of these was put on the tree. They cost ten or fifteen cents each, and whether it would pay the fruit-growers is, of course, a matter for them to settle for themselves.

Dr. BEADLE: I think they would be very much more effective in catching the female canker-worm.

Prof. FLETCHER: Yes, and the females of the canker-worm are unable to crawl over them while they are new.

Mr. CASTON: I do not see, if an insect is able to crawl up a tree, why it should not crawl over this protector.

Prof. FLETCHER: They slope outwards from the trees and are very smooth inside when new. Of several specimens I watched, I saw nearly all drop as they got on that smooth surface. I did not find that they crawled over them while they were new. But as to the canker-worm, there is no doubt the remedy is to spray your trees while the caterpillar is on them. The great pest in Manitoba on their shade-leaf maple is the canker worm; and in the streets of Winnipeg for the last two or three years these trees have been almost defoliated by canker-worms. This year Mr. Fonseca, of Winnipeg, used a spray-pump, and got some others to do it, and the trees were to a large extent saved. Another pest there was one of the aphides, or plant lice. The town clerk of Selkirk wrote to me, and I recommended him to use kerosene emulsion, and he wrote back that they had sprayed several hundred large trees and saved them. That was on the ash-leaf maple.

Mr. M. PETTIT: In the Niagara district this spring the plum trees were very badly injured by the aphid on the under side of the stem of the plum, and on the young growth of wood. It made its appearance quite early and kept on increasing until the plums were the size of a marble. Where it was very thick over the fruit leaves it checked the growth of the trees, and the fruit withered and dropped, and it weakened the trees very much. We sprayed with kerosene emulsion. Where you can get that on to them it is all right; but it is simply impossible to cover any proportion of them, they were so thick; and you could not spray so as to strike up under all the leaves and touch them. If it appears another year, should we commence earlier, before they become so numerous, and what is our best means of fighting them?—because it is going to be a serious matter in growing plums.

Prof. FLETCHER: Were they black plant-lice?

Mr. PETTIT: Yes, but they appeared green when young.

Prof. FLETCHER: That species has been successfully fought in the States—in New York and New Jersey—by using kerosene emulsion. The eggs are laid on the trees, and pass the winter there, and then they hatch in the spring, and if you treat your trees early enough you will have much less trouble.

Mr. PETTIT: How early would you recommend?

Mr. FLETCHER: I think as soon as the buds burst.

Mr. PETTIT: They could be reached at that time; but it is simply impossible when the foliage is thick.

Prof. FLETCHER: They are sometimes very injurious. One great pest in British Columbia last year was the apple aphid, and I have received a large number of letters saying that large fifteen year old trees had been destroyed entirely by the apple aphid. The kerosene emulsion has been tried by some satisfactorily. For plant-lice one part of emulsion to twelve of water would be sufficient strength.

Mr. MCNEILL: Is there any connection between the disappearance of these and the appearance of the little orioles, and the little bird that appears at the same time? I have actually seen those little birds go along and just eat them in countless hundreds—duck around and gorge right into where there was a mass of those insects—eat them out by the millions.