

has spread very rapidly. In 1862 it was noticed as doing a great deal of damage in Western Ontario, in the vicinity of London. Last year it spread through nearly all Ontario. I think it was probably introduced in the seed.

Q. Does it destroy the white clover?—It feeds also upon the white clover, and that is one of the difficulties of exterminating it. Mr. Lintner, of New York, says it can be kept under by cutting the first crop of clover. In the State of New York they cut clover twice a year, in June for hay, and in the fall for seed. This midge, like the wheat midge, lays its eggs on the seed vessels, and the larvæ feed on the seed. By cutting the clover early, when the larvæ are young, you destroy all that brood, and then before the next crop is in flower the midge will have almost disappeared. So that, though the farmer would lose a small amount on the first crop by cutting it early, he would save, by the absence of the midge, on the seed in the fall. Then, I may say, that in the distribution of the clover seed, care should be taken. A person importing the seed should see that it does not contain the larvæ, because it will sometimes remain in the seed, or among it, during the winter.

Q. Does that insect attack the hybrid clover?—It will attack all clover. It is entirely new to science within the last few years, and, as we see, it has spread immensely, and has done very many thousands of dollars worth of damage in Ontario.

*By the Chairman:*

Q. Do you think beneficial results would follow the appointment of a Government entomologist?—Certainly. I think there can be no doubt of that; because a Government entomologist would have the time and the means to investigate all insects. He would be the first to hear of them appearing at certain points; and he would be the first to tell whether they were injurious or beneficial. By the publication of annual reports, and by the issuing of bulletins whenever any special insect attracted attention, he would do much good. For instance, there are insects that may be here in a short time. There has been found, in New York State, a small beetle which attacks the roots of the clover. This is, of course, an entirely different insect to the midge that works upon the seed. It is an imported beetle from Europe, and has only been lately noticed. It has been found to be very destructive. It injures and weakens the roots that it is impossible to mow; the mower tears the roots out of the ground. Of course that may be greatly remedied by ploughing up the crop after the second year and rotating something with it. That insect may be found here in a short time; it has only to cross the St. Lawrence to reach us. In a case of this kind, a Government entomologist, being in communication with entomologists on the other side, would know the insect, and would be in a position to suggest the remedies to apply. Besides, if he thought there was any special necessity for it he could issue a bulletin at once, as is done in the United States, with reference to any special insect.

Q. Do you believe that if the Government appointed an entomologist, and if a proper knowledge of entomology was diffused among the farmers, the ravages done by insects would be diminished?—Certainly. The farmers last year would have suffered much less loss through the attacks upon their clover seed had they known how to meet the insect. Why, if they had saved only one per cent. more of that crop, they would have suffered less by thousands of dollars. And one per cent. upon the entire crops of Canada, means two or three millions of dollars.

*By Mr. Landry:*

Q. What is the best remedy for that clover insect?—To cut the first crop early while the larva is young. By doing this the larva is killed in the grain and there is no second brood to attack the fall crops.

*By Mr. Fisher:*

Q. How early would it be necessary to cut it?—Soon after it is in flower. The midge lays its eggs as soon as the plant is in flower. Of course, the farmer must first look to see if the midge is laying in the plants. The midge is a very small insect but it is easily distinguished from other insects; it is smaller than the wheat midge. By examining the flower occasionally, if the midge has been there, you will see, when the larva are growing and that is the time to cut it. You must cut