

PEACH BORER.

BY MARTIN BURRELL, ST. CATHARINES.

I have not had very much experience with the Peach Bark Beetle. As far as the Peach Borer goes I have done a little experimental work in the last year or two, and as we all know it is one of the worst insects we have to fight, especially on a sandy soil. Probably most of you know a great deal about its life history. What we call the borer is not the bark beetle, as most of the wood boring insects are, but is the larva of a moth a good deal like a wasp. The female moth is $\frac{3}{4}$ of an inch long, and is bigger than the male. The front wings are dark blue, and the hind wings quite transparent, and you can always know it from the shape of the body, which is a darkish blue with one large orange band around the abdominal segments. You cannot mistake it for any other insect. The male is very much smaller and inconspicuous. The wings are transparent, and there are some slight little marks about the body, but it is much smaller and less showy insect than the female. In this latitude I found that the moth never emerged before July 15th or 20th. It was thought at one time that the moth began to emerge very early in spring and commence laying, and it is rather an important point, as you can see, because in hunting out these borers, whether you put on a wash to prevent them laying the eggs, or put on papers, or whatever practice is adopted, it is necessary to know what is the best time to go to work. It was formerly thought that they came out very early, and it was necessary, in order to prevent them laying, to put on washes very early. As a matter of fact in New York State they do not come out until about July 15th, as Mr. Slingerland tells me at Cornell, and here I have never observed one out before July 20th. This is important for the reason that you are always safe if you can clear them out before that time, for you will destroy the crop for that year—that is you will prevent the moths emerging. If you use any wash to prevent the moths laying the eggs, the greatest difficulty is to find a wash that will remain on the tree the whole season, because the moths start emerging about the 20th July and keep on from that time until the 20th of October emerging and laying. There is only one brood a year. For instance, in the case of the moth that lays the eggs July 20th, the larva hatches and gets three-quarter grown by the late fall. It then passes the winter in the tree below the ground dormant, and the next spring starts working, and then turns into a chrysalis fairly early, about June, and remains about a month in the pupa stage. Those that come out in September do not hatch out until about the following September. The whole process is just about one year. That period of time extends very much longer than some people thought, and it is all the more necessary if you are going to have a wash to prevent the moth laying its eggs to cover the whole of that period from early in July to early in October. There are very few washes that will stay on the tree during that time intact, and if we go to the expense of two washes it makes the matter very much more cumbersome. Mr. Smith, of New Jersey, told me that he found 600 eggs in one moth, and Mr. Slingerland has found 300 by examining them with the microscope very carefully. They have found as many as 28 laid on one tree. I have taken out 14 borers on one tree, and of course the tree was nearly gone. The danger is worst on the smooth trees, because the tree of course is only about two inches through. If a half-grown borer is there it can almost girdle it. Every man should examine peach trees before he plants them, because there is many a time you get a borer in a nursery row. I have often taken them out of the trees I had from the nursery, and taken them out before I planted them. Those of us who hunt them regularly generally hunt them out with a knife or a wire, and any time during the year; but the best time to do it would be once in the early spring before the larvæ matured, and the next late in the fall. I believe we get very much better results if we practice the application of some washes. A year ago last spring I tried three different kinds of paper—tar paper, bunches of wrapping paper, and ordinary newspaper, and also heaping up air-slacked lime around the trees and Bordeaux mixture, with half the amount of lime and half the amount of