

slug and winged state. Professor Peck has described a minute ichneumon fly, stated by Mr. Westwood to be a species of *Encyrtus*, that stings the eggs of the slug fly, and deposits in each one a single egg of her own. From this in due time a little maggot is hatched, which lives in the shell of the slug-fly's egg, devours the contents, and afterwards is changed to a chrysalis, and then to a fly like its parents. Professor Peck found that great numbers of the eggs of the slug-fly, especially of the second hatch, were rendered abortive by this atom of existence.

Sand, ashes, lime and hellebore have been recommended as remedies for this pest but the last mentioned is by far the most reliable. In 1870 we tried some experiments with these remedies, and reported in the *CANADIAN ENTOMOLOGIST* for September of that year, as follows:—

THE PEAR TREE SLUG.

This disgusting little larva, the progeny of a little blackish sawfly, has been very abundant during the past season and has been the subject of some notes and experiments. In the first place we noted that there were two broods in the season. The parents of the first brood, which pass the winter in the chrysalis state, appear on the wing about the second or third week in May, depositing eggs from which the slugs are hatched, becoming full grown from the middle to the end of June, then entering the chrysalis state underground; the second brood of the flies make their appearance late in July. This year we noticed them at work depositing eggs on the 21st, the young slugs were abundant and about a quarter of an inch long on the eighth of August, and by the sixth of September many of them were full-grown. With us they were much more destructive to cherry trees than to pear, consuming the upper surface of the leaves, soon giving the trees a scorched and sickly aspect, and in many cases the foliage fell off, leaving the trees almost bare.

As soon as the slugs were observed at work in Spring, they were treated to a plentiful supply of dry sand, thrown up into the higher branches with a shovel, and shaken over the lower ones through a sieve, which stuck thickly to their slimy skins, completely covering them up. Thinking we must have mastered them by so free a use of this long trusted remedy, we took no further heed of them for some days, when to our surprise, they were found as numerous as ever. The next step was to test this sand remedy accurately to see what virtue there was in it. Several small branches of pear trees were selected and marked, on which there were six slugs, and these were well powdered over—entirely covered with dry sand; on examining them the next morning it was found that they had shed the sand-covered skin and crawled out free and slimy again. The sand was applied a second and third time on the same insects with similar results; and now being convinced that this remedy was of little value, they were treated to a dose of hellebore and water, which soon finished them. Ashes were now tried on another lot, the same way as the sand had been, with very similar results. It was also intended to try fresh air slacked-lime, which we believe would be effectual, but having none on hand just then, the experiment was postponed, and the opportunity of testing it lost for the season. We must not omit mention of an experiment with hellebore. On the 13th of August, at eight a.m., a branch of a cherry tree was plucked, on which there were sixty-four slugs; the branch had only nine leaves, so that it may be readily imagined that they were thickly inhabited. A dose of hellebore and water was showered on them about the usual strength, an ounce to the pailful, when they soon manifested symptoms of uneasiness, twisting and jerking about in a curious manner; many died during the day, and only six poor, sickly-looking specimens remained alive the following morning, and these soon after died.

During the past season these slug worms have been unusually abundant on our pear trees, in many cases destroying the foliage so thoroughly that they looked as if they had been scorched by a fire, every leaf in some instances dropping from the trees, so that for a time they were bare as in mid-winter. Nearly a thousand trees in the young pear orchards of the writer suffered severely. During the latter part of June and the early days of July we had no opportunity of inspecting these trees, and when we visited them on the 7th of July they were so much injured that we thought they could not be much worse, and as the slugs were then full-grown and fast disappearing and the application of a remedy to so many trees a matter of much labour nothing was attempted to remedy the evil then.

It was observed that some trees were remarkably exempt from the attacks of these slugs Clapp's favourite deserves to be especially mentioned on this account, its thick glossy leaves

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