

they pass the pupa stage, emerging again in the fly form to repeat their work of destruction.

In the summer of 1840, the Massachusetts Horticultural Society offered a premium of one hundred dollars for the most successful mode of destroying these slugs. Whale oil soap, in the proportion of two pounds of soap to fifteen gallons of water, sprinkled over the rose trees so as to wet the upper surface of the leaves as often as the slugs make their appearance, will be found effectual. The writer, however, prefers to use white hellebore, for the reason that a supply of this must needs be at hand to combat the Gooseberry Sawfly, and is equally destructive to this one when applied in the same manner. In using the hellebore it will be found advantageous to dissolve a little alum in the water, which will have the effect of making the hellebore adhere to the leaves. It is very important that the rose-grower be on the watch for this insect, and apply the hellebore or the whale-oil soap as soon as the slugs appear, for they work with great rapidity. Mr. Harris says that a second brood makes its appearance in August. We have not noticed this to be the case here, and we think that if the brood that works in the latter part of June and the beginning of July is thoroughly treated in the manner above mentioned, there will be nothing to fear from the August brood.

*The Rose Leaf Hopper* is a most provoking little pest, as agile as a flea, and as numerous as ever was the flea in Tiberias, where it is said that the king

of the fleas holds his court. And a cunning little fellow is he too, for when he sees you approaching from one direction he will hastily dodge off in the opposite, and if you press him too close he will take to himself wings and fly. Entomologists call this insect *Tettigonia rosea*. When it first appears it has no wings, is a small white creature, to be found on the underside of the rose leaves, with its proboscis thrust into the leaf, from which it is sucking the juice or sap. As they grow they cast their skins, which may be found adhering to the underside of the leaf, until arriving at maturity they are also supplied with wings. In the autumn they secrete themselves among fallen leaves or other rubbish, pass the winter in a dormant state, appear again the following summer, lay their eggs and perish. If they would only die before they laid their eggs; but then, they won't.

The remedies that have been found most efficacious are whale-oil soap, as recommended for the rose-slug, and tobacco-water. But in order that these may destroy the leaf hoppers, they should be applied when the insects are young. The gardener should be on the watch for them about the middle of June, this season they were abundant as early as the tenth of June. If allowed to grow they become at each successive moult more tough skinned, and less sensitive to the effects of the tobacco or the whale-oil soap. Poisons do not reach them, inasmuch as they do not feed on the substance of the leaf, but subsist by sucking out the juices, and in this way causing the leaf to turn