

leaves (seven hundred hills, each with two poles and two vines) to an acre of hops, as grown in the United States, will not, on the average, much exceed a million before the period of blooming or burning; so that the issue from a single stem-mother may, under favouring circumstances, blight hundreds of acres in the course of two or three months."^{*}

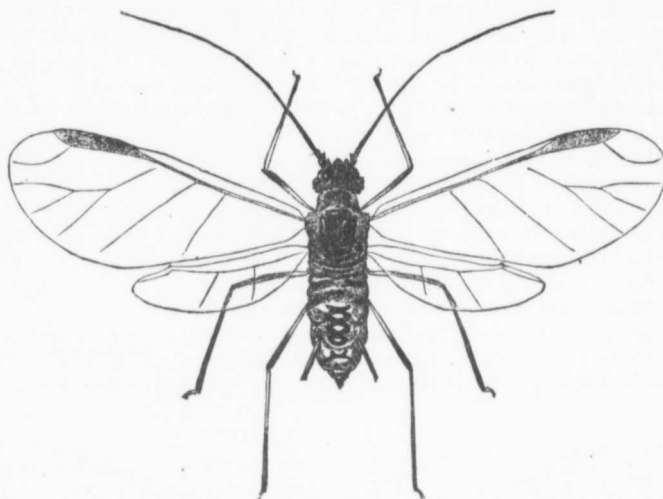


FIG. 38.

Winged male enlarged.

The foregoing account of the life-history of the Hop Aphis is so wonderful and interesting that we feel sure the readers of our reports will be glad to have it brought before them. It is also of great value, as it enables hop growers now to apply remedies and use methods of prevention that could not have been devised when the true habits of the insect were unknown.

The first and most obvious preventive measure is the destruction of the Aphis on the plum trees in early spring before they have migrated to the hop. This can be done by syringing the trees with a strong tobacco or soap wash, or more effectively still, by using a weak kerosene emulsion. Receipts for making this were given in our report for 1886, but for convenience sake we quote a simple method recommended by



FIG. 39.

Eggs and shrivelled skin of female which laid them, enlarged.

most efficient as a remedy for plant-lice, and may be used against them wherever they are found—upon the plum, or hop, or anywhere else.

^{*} We have to thank Dr. Riley for his kindness in permitting us to use the above illustrations of the Hop-Aphis. They were originally drawn by him to illustrate his paper on the subject in "Insect Life," vol. i., pp. 133-136.

Another male, of a large size, is the immediate neighbor of the insects.

When the insects should be at once destroyed, this pest should be at once destroyed, otherwise its destruction will be delayed.

This insect is found in the States, and often in the larva, or maggot stage, destroys it, partly by its feeding.

The accompanying illustration below showing the insect and below it the right exhibits the of the onion bulb in the season on close to the surface the young maggots penetrate downwards of the bulb. So found together; colour, tapering and destitute of legs. They usually lie just under the mud, which is kept of the injured plant fortnight, and the brown pupae, of which flies emerge in a at once lay their the bulb, the fly close of the season winged flies come Such, in brief, is

The best method of doing this is to bury the bulb done by earthing deposit their eggs if this is well covered ground, and the place, and consequently growing onions is gradually drawing the bulb always covered of the insect.

The second method will be sufficiently For this purpose over the bed about thickly, as it is easy