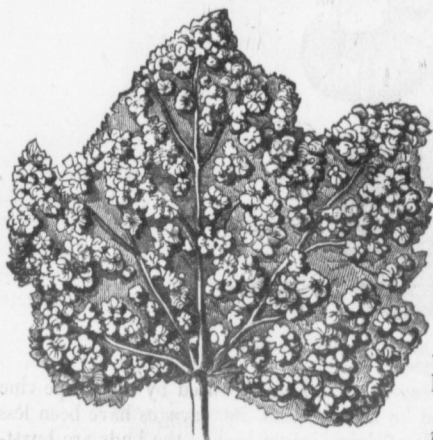


their withering and dropping from the vine. In the figure the insect is magnified; the small hair lines at the sides show its natural size.

During the summer, when looking over the vineyard of W. H. Boulton, Esq., of "The Grange," Toronto, we saw a Clinton vine badly affected with the grape leaf gall louse,

FIG. 16.



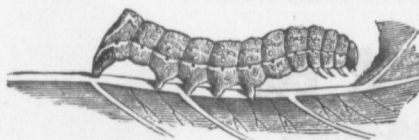
*Phylloxera vitifolia*. When the leaves are assailed by this insect, they soon become covered with green excrescences, of various sizes and shapes, as shown in Fig. 16. In this instance it did not appear to affect more than the one vine, but if not attended to, would no doubt spread rapidly.

A full history of all the foes to grape culture thus far enumerated, as well as some others not mentioned here, may be found in the report of the Commissioner of Agriculture for 1870, to which the reader is referred, see p 324 to 347.

There are two insects injurious to the grape, which were omitted in last year's report, whose history we will detail now.

The green grape vine worm, *Amphipyra pyramidoides*. We have found this caterpillar destructive to vines for several years past, but more particularly affecting those grown under glass, see Fig. 17; it appears early in June.

FIG. 17.



Its length is from one and a quarter to one and a half inches, the body tapering towards the front, and thickened behind. The head is rather small, flattened in front, and of a whitish green colour, with the jaws or mandibles tipped with black. The body is whitish green, a little darker on the sides, with a white stripe

down the back, a little broken between the segments or rings, and widening somewhat behind. There is a bright yellow stripe on each side, close to the under surface, which is most distinct on the hinder segments, and a second one of the same colour, but fainter, half way between this and the dorsal line; this latter is more distinct on the posterior portion of the body, and follows the peculiar rise or prominence on the 12th segment as shown in the figure. The under side of the body is pale green.

When full grown this caterpillar changes to a dark brown chrysalis, either at, or a little under the surface of the ground, from which the moth appears in the latter part of July. These which we have reared, have usually appeared about the 20th of the month. We have found this larva feeding on the thorn, as well as the grape, and Mr. C. V. Riley of St. Louis, Mo., has taken it on the Raspberry, the Red Bud (*Cercis Canadensis*) and the poplar.

FIG. 18.



The moth which is well represented in Fig. 18, measures when its wings are expanded about one and three quarter inches; the fore wings are dark brown, shaded with paler brown, and with dots and wavy lines of dull white. The hind wings are reddish, with almost a coppery lustre, becoming brown on the outer angle of the front edge of the wing, and paler towards the hinder and inner angle. The under surface of the wings is much lighter in colour than the upper and the body is dark brown with the hinder portion banded with lines

of a paler hue. When these prove troublesome, we can suggest nothing better as a remedy than hand picking.

*Agrotis depressus* Grote.—The caterpillar of this moth is of a yellowish green colour, with a few very fine brownish hairs scattered over the upper surface of the body. We have found it feeding on the grape for two summers past and in some places in numbers sufficient to be

troublesome. inches; the surface of the there is a wh est one being ish dots, scar hair.

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