

Fig. 11.



they have more or less of a family resemblance in all their different stages. Fig. 10 shows the caterpillar and chrysalis, and Fig. 11 the perfect moth, with its wings expanded as well as folded.

The life history of the other leaf-rollers referred to above has not yet been fully worked out, and as they have not thus far attracted much attention, we pass

them over with this brief notice.

Remedies. Since all these leaf-rollers feed on the foliage and come out of their hiding places for this purpose, an application of hellebore and water on the leaves would probably destroy many of them. It has also been recommended to plough deeply either in the Autumn or Spring, such beds as may be badly infested, with the view of burying the chrysalides sufficiently deep to ensure their destruction. Hand-picking may also be practised with advantage, as the curled leaves are easily seen.

A CUT-WORM (*Agrotis*).

This is an insect which has been most unusually injurious during the past season on the fruit plantations of Mr. Mountjoy and Mr. Bunning, on the borders of Lake Huron, near Sarnia. At first its habits were not understood, and it pursued the "even tenour of its way" uninterrupted night after night; the perplexed fruit growers not knowing why it was that every day the foliage on their fruit trees and strawberry patches grew slimmer. But soon it was found that the enemy was a night worker, and this knowledge of its habits was at once turned to account, and night watches instituted with the view of counteracting this insidious foe, and with good results, as many as 1800 having been killed by Mr. Mountjoy in one night.

Their manner of life may be thus described. The moths from which the worms are produced appear on the wing during the month of August, and soon after pair, and deposit their eggs on the ground or on some plant or other substance near the ground; they probably hatch in the fall, and feed for a time on the leaves of grass and other plants then abundant, and after attaining but a small measure of their growth, they burrow into the earth, and there remain in a torpid state during the winter; but the warmth of spring revives them and soon they are abroad and active. During the first few weeks while they are still small, the quantity of food they consume is not sufficient to attract much attention; but as they approach nearer maturity, that is about the time when the trees first put out their tender foliage, the quantity of food they consume is enormous. In the day time they rest tolerably secure from harm, by burrowing a short distance underground, and towards night they sally forth from their hiding places to begin their work of destruction. They are extremely active in their movements, and travel over quite a space of ground in a very short time, eating almost everything green in their way; they climb the trunks of trees, and consume not only the young foliage, but the buds also, leaving the limbs almost bare, and before the light of another day dawns they retreat to their hiding places and rest in quiet. When full grown they burrow deeper into the earth, and form for themselves an oval cell or chamber, in which they change to chrysalis, and from which the moths are produced early in the autumn to continue the race.

In this instance these caterpillars took a decided liking for the strawberry vines, and in spite of the most vigilant search for them day after day and night after night, they defoliated a large patch of the vines to such an extent that they were utterly ruined. Nearly all through the month of June they literally swarmed and scarcely a night passed without considerable damage being done by them. It was late in the month when we received a package of the larvæ from Mr. Mountjoy, and from which the following description was taken on the second of July:—

Length one and a half inches, cylindrical, coiling the body up when disturbed, and discharging a green liquid freely from the mouth when handled.

Head small, rather flat, scarcely bilobed, of a dull brownish yellow colour, with a triangular looking furrow in front, the base of the triangle being towards the mouth; between the lobes the colour is of a slightly darker shade. On the upper part of each