

## Entomology.

## Insects Injurious to the Grape.—No. 2.

In our last issue we enumerated the various Beetles that prey upon the Grape; we now come to the Caterpillars, which form a pretty formidable battalion in the army of insect enemies. Caterpillars, as everybody knows, turn into either Butterflies or Moths; all of those, however, that attack the grape-vine turn into Moths, none of the butterfly-larvæ having yet been found culprits in this country. One of the largest and commonest of the Moth-larvæ that prey upon the Grape is called the VINE-DRESSER SPHINX (*Darapsa pampinatrix*, Smith). During July and August this great fat caterpillar may be found eating the leaves of the vine, and often nipping off the stems of the half-grown fruit, causing the unripe grapes to fall to the ground. When full grown it is about two inches and a half in length, of a pale green colour, except after its last moult, when it becomes of a dusky olive shade. On the top of the back there is a row of orange spots, and on each side a bluish stripe, from which proceed six or seven oblique stripes of a dark green or brownish colour; at the end of the back there is a short stiff horn-like tail. The head and two following segments are small, while the next two are very large and humped, thus causing the fore part of the body to look somewhat like the head and snout of a pig. It turns into a chrysalis under leaves on the ground, making for itself a sort of cocoon; here it remains all winter, coming out in the winged state about the following June or July, according to the season. The presence of this caterpillar may generally be detected by the appearance of its droppings upon the leaves and ground, which are black and regularly formed as if in a mould. The moth may be found hovering about flowers during the dusk of the long summer evenings, like a small humming-bird; its body and fore wings are of a beautiful olive-green colour, while the hind wings are of a rusty red, without any spots or other markings. As this caterpillar is very destructive it is quite worth while to look carefully over the vines from time to time, and pick off and destroy all that may be found; a little practice will enable one to detect them without much difficulty, in spite of their resemblance in colour to the leaves on which they feed. Nature, too, provides a remedy in the shape of a tiny ichneumon fly, which deposits its eggs on the back of the caterpillar; from these little grubs hatch out and burrow into the fat of the worm, coming out again just before its death, and building their funny little cocoons all over its back. Mr. Lintner states that about nine-tenths of those which he has taken and endeavoured to rear have been destroyed in this manner; thus effectually does nature perform its work of keeping their numbers in subjection.

Another Sphinx Caterpillar that preys upon the vine is the SATELLITE VINE-LOVER (*Philampelus Satellitia*, Linn.) This species is much larger than the preceding, but is not so common in this country. We have seen the caterpillar of either it or a kindred species (*P. Achemon*, Drury), some years ago in the neighbourhood of Hamilton, but the perfect insect has only been taken in Canada, so far as we are aware, by the Rev. V. Clementi, Lakesfield, North Douro, who captured a fine specimen in the summer of 1866. According to Dr. Harris, "when young these caterpillars have a long and slender tail, recurved over the back like that of a dog; but this, after one or two changes of the skin, disappears, and nothing remains of it but a smooth, eye-like, raised spot on the top of the last segment of the body. Some of these caterpillars are pale green, and others are brown, and the sides of their body are ornamented by six cream-coloured spots, of a broad oval shape in the species which produces the *Satellitia*; narrow, oval and scalloped in that which is transformed to the species called *Achemon*. They have the power of

withdrawing the head and the first three segments of the body within the fourth segment, which gives them a short and blunt appearance when at rest. As they attain to the length of three inches or more, and are thick in proportion, they consume great quantities of leaves; and the long leafless branches of the vine too often afford evidence of their voracity. They come to their growth during the month of August, enter the earth to transform, and appear in the winged state the following June or July. The moth of the first named expands from four to five inches, and is of a light olive colour, variegated with patches of darker olive. That of the latter expands from three to four inches, is of a reddish ash-colour, with two triangular patches of deep brown on the thorax, and two square ones on each fore wing; the hind wings are pink, with a deeper red spot near the middle, and a broad ash-coloured border behind."

Yet another Sphinx Caterpillar which feeds upon the vine is the *Thyreus Abbottii*, Swains. This insect has very rarely been taken in Canada, and is not particularly common in the United States; it is unnecessary, then, to give a minute description of it. The larva differs from the preceding in being of a reddish-brown colour with various markings, instead of green, and in having a rounded tubercle instead of a caudal horn; its length is about three inches. The moth has very beautifully scalloped wings, brown marbled with black and dusky yellow, the hind wings being pale yellow with a broad black border.

The EIGHT-SPOTTED FORESTER (*Alypia 8-maculata*, Smith) is the next foe to the grape-vine that attracts our notice. This is a very pretty caterpillar, banded with orange and light blue, and with a conspicuous white spot on each side of the hind part of the body; it grows to a little over an inch in length, and is found in June and July. The moth appears earlier in the season, and is a very lovely creature; its general colour is deep glossy black, each of the fore wings having two rather large pale yellow spots, and the hind ones two smaller white ones; the thorax has a pale yellow stripe on each side, and a dot of the same colour in the middle; the neck and two dots on the head are also pale yellow, while the thighs are very thick and of a rich orange-red colour,—the contrast of colours is remarkably striking and beautiful. Strange it seems that so fair a form should come from a pernicious worm! Its beauty and variety should cause us to deal gently with it, as it is a native of a more southern clime, and is only occasionally found in our more rigorous latitude.

Another fair offender which we may expect to find some day in this country, though its appearance has not yet been chronicled, is the AMERICAN FORESTER (*Procris Americana*, Boisdu). The larvæ of this moth are found in the United States, in August, on the Isabella and other varieties of grape-vines; they differ particularly from those above mentioned in being gregarious in their habits, while the foregoing are all solitary feeders. They are thus briefly described by Dr. Fitch:—"Standing in a row, side by side, on the under surface of the leaf, eating its edges and leaving only the coarse veins, little yellow worms about three-fifths of an inch long, and slightly hairy, with a transverse row of black spots on each wing; forming their tough, oblong, oval cocoons in crevices; the moth appearing the following July, wholly of a blue-black colour except the neck, which is bright orange-yellow, its body ending in a broad fan-like notched tuft." He adds that it is much more common at the west and south than in New York. This, and all the foregoing species, feed upon the Virginian Creeper as well as upon the wild and cultivated grape-vines.

THE CHARMING WOOD-NYMPH (*Eurys grata*, Fabr.) is the romantic name of the next on our list of depredators, and well does it become the name, for a more charming little moth it would be difficult to discover. One feels quite averse, when viewing its pretty shape and lovely colors, to draw attention to the misdemeanours of its early life; but we have often caught

it in the act of ravaging our vines, and have repeatedly watched it through all its stages when rearing it in confinement. The caterpillar appears about the end of July; its general color is blue, prettily banded across the middle of each segment with deep



orange-red, dotted with black; the head and feet are also orange-red; one of the hinder segments is considerably thicker than the rest, and bulges above them. It is generally to be found, when at rest, upon the under side of the leaf, feeding in solitude; it devours the leaves entirely, not being so delicate a feeder as the preceding. When full grown it buries itself a few inches in the ground, and there spends the winter, the moth coming out about the end of the following June. To give a minute description all the beauties of the perfect insect would occupy far too large a space, and would, moreover, be quite unsatisfactory; we shall, therefore, confine ourselves to quoting Dr. Fitch's short description, which is sufficient to identify the insect. "The fore-wings are milk-white, bordered behind and also on the outer side from the base to the middle with rusty brown, edged on the inner side with greenish olive, and with a wavy bluish-white line on the hind edge at the base of the fringe; hind wings nankin yellow with a blackish-brown border, which does not extend to the outer angle." The moth rests with its wings sloping together like a steep roof, covering its back, and its thick tufted fore legs stretched out in front of it, like the paws of a lion watching for its prey. If it is desired to destroy the caterpillars, they can easily be detected upon the vines and picked off, to be dealt with in any manner that the reader chooses.

Other caterpillars that attack the vine, but which are too small to inflict much damage, are the pretty spotted sable (*Desmia maculalis*, Westw.), and several species of the curious slit-winged moths, or plumes, as they are often called (*Pterophorus*); many of them we have taken in this country.

## Miscellaneous.

## East Wind.

REV. JOHN TODD, D. D., thus hits off those farmers who are perpetually dissatisfied:—

Why should the wind coming from the east over an ocean of water depress the human body, while that which comes from the west across a continent enlivens the spirits and gives courage and vigor? Be this as it may, it seems as if some people never felt any wind, that was not east. They are always "out of sorts." The weather is always just what they don't want. I met one of these men awhile ago, a farmer, who raised all manner of crops. It was a wet day, and I said:

"Mr. Nayling, this rain will be fine for your grass crop."

"Yes, perhaps; but it's bad for the corn and will keep it back. I don't believe we shall have a crop."

A few days after this, when the sun was shining hot, I said:

"Fine sun for your corn, sir."

"Yes, pretty fair, but it's awful for the rye. Rye wants cold weather."

Again, on a cold morning, I met my neighbor, and said:

"This must be capital for your rye, Mr. Nayling."

"Yes, but it is the very worst weather for the corn and grass. They want heat to bring them forward."

So the man lives in a perpetual east wind. Nothing suits him, and it would be impossible for Providence to give him weather about which he would not grumble.

PUNISHMENT FOR DRUNKARDS.—On this subject "R. M." says: "While residing in St. Petersburg I have frequently seen parties of most unhappy-looking individuals sweeping the streets under the directions of a guard with fixed bayonets. These are the tipsy people of the previous day, lodged for the night at the police-stations, and in the morning obliged to do penance as scavengers."