

from its leaf by a fine silken thread. After it has attained to maturity it descends to the ground, and crawling into any crevice or other place of concealment, forms a slight silken cocoon and changes into the chrysalis state.

FIG 23.



In this condition it remains for a fortnight or three weeks, and then comes forth at the end of June or early in July as a dusky brown moth, measuring an inch and a quarter across its expanded wings. The forewings are marbled with gray beyond the middle, and have a distinct gray spot on the tip; they are crossed by two wavy blackish

lines, one near the middle and the other near the outer hind margin. These lines are formed by little elevated black tufts, and there are also two similar tufts on the middle of the wing. The hind wings are dusky brown or light brown, with a pale fringe, and are without bands or spots."—(Harris). A peculiarity of the insect, from which it derives its common name of "Snout-Moth," is that it has a pair of very long and slender compressed palpi or feelers, which project from the head in the form of a snout. The accompanying wood-cut (Fig. 23) represents the creature in all its stages. There are two broods in the year; the caterpillars of the second appear in July and August, and attain to the imago state in September.

This insect is rather variable in its appearance, but is oftentimes excessively destructive. In 1869 we observed two Hop-yards in the County of Peel almost ruined by it, while in the preceding and succeeding years no great number of the caterpillars was to be seen. Dr. Fitch considers it "the most universal and formidable of the depredators of the Hop, making its appearance suddenly, in a few days sometimes, and before their presence is noticed completely riddling and destroying the leaves of whole fields." In Europe there is a similar insect, termed the Beaked Snout-Moth (*Hypena Rostralis*, Linn), which may be identical with our species; probably, indeed, our insect, like so many of our greatest pests, has been introduced from the other side of the Atlantic.

The most approved remedy for the insect is to drench the vines with strong soap-suds. To shower them with powdered white hellebore mixed in water—an ounce of the drug to a pailful of water—would, we should think, be even more effective. Much might also be done by jarring the poles among which the Hops are entwined, and crushing under foot all the caterpillars that fall to the ground.

3. THE SEMICOLON BUTTERFLY. (*Grapta interrogationis*, GODT.)

LEPIDOPTERA—NYMPHALIDÆ.

The two species already described are by far the worst insect enemies that the hop-grower has to deal with. The others to which we now desire to draw attention are seldom found in sufficiently large numbers to cause much alarm, though at times their depredations are somewhat serious, especially when they attack a few hop-vines in a garden.

The species before us, the Semicolon Butterfly (*Grapta interrogationis*, Godt), is a large handsome insect, with wings above of a tawny orange colour, spotted with black and brown; beneath, the wings are in some specimens rusty red, in others marbled with red and brown tints; in the middle of the underside of the hind wings there is a conspicuous silvery mark, shaped like a small semicolon (;), from which the species derives its name. The modern semicolon is employed in the Greek language as the mark of interrogation; hence both common and technical specific names have the same meaning and refer to the same characteristic. The wings of this butterfly measure, when expanded, as much as two and a half to three inches. There are two broods of them in the year, the first late in June, the other in August.

The larva feeds upon the leaves of the elm and basswood, as well as upon the hop. When partially grown, in the early part of August, it is thus described by our friend Mr. Saunders:—"Length, half an inch. Head black; body above, black, with transverse