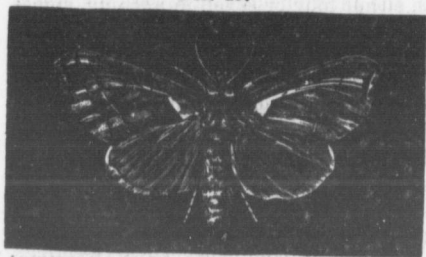


there are ten or twelve of these tubercles, which almost cover the whole surface, and from each of the tubercles throughout there arises a single whitish hair.

"The under surface is of a deeper green than the upper, with a few short whitish hairs, chiefly on 5th, 6th, 7th, 8th, 11th and 12th segments; feet, green; pro-legs, of which there are three pairs, green also.

"This larva became a chrysalis on the 18th of June, and produced the moth on the 13th of July."

FIG. 25.



The Moth (Fig. 25), into which this caterpillar turns is a remarkably handsome creature; the fore-wings are almost entirely covered with brilliant metallic green scales, darker below the middle, and paler towards the inner angle; they are crossed by two oblique dark lines. The hind-wings are a dusky grey, without markings. The wings expand about an inch and three quarters. We have usually taken the moth in the month of August, and have found it in various parts of this

Province.

As this species is seldom numerous, it is unnecessary to suggest any remedy. In all probability its numbers are prevented from becoming excessive by some insect parasite.

5. THE IO EMPEROR MOTH (*Hyperchiria varia*, WALKER).

Automeris io Fabr.

LEPIDOPTERA-SATURNIADÆ.

Besides the foregoing, there are two other insects that affect the hop-vine, respecting which we would say a few words before leaving this subject. One of these is so very general a feeder that it can hardly be termed a Hop insect; it is the larva of what is commonly known as the Io Emperor-Moth, of Harris (*Hyperchiria varia*, Walker). It feeds indiscriminately upon the leaves of willow, elm, white poplar, cornel, sassafras, cherry and locust, as well as the Hop; it is even said to eat clover and the leaves of Indian corn. When first hatched out, the caterpillars are dark brown, and covered with bristles; later on, when about a third of an inch in length, their general colour is black, the body being entirely covered with long sharp branching spines, and having two reddish white lines along the sides. When fully grown, they attain to a length of two and a half inches, and are of a delicate yellowish green colour, with a reddish lateral band, not extending the whole length of the body towards the head; the spines are then of a pale yellowish green colour, and have an irritating property, like that of the stinging nettle. Specimens that we have reared formed their cocoons in September, and appeared in the perfect state in the following June. The Moth varies very much in the two sexes, but both are remarkably handsome. The male is of a deep yellow colour, with a few darker lines across the fore-wings; the hind-wings are broadly bordered with purplish red next to the body, and have in the middle of each a large and beautiful eye-like blue spot. The female, which is usually larger, has its fore-wings, of a purplish brown colour, with grey transverse lines, and its hind-wings coloured like the male, and with a still larger eye-like spot.

The insect is quite common throughout Canada and the Northern States, but never so numerous as to be considered destructive. The Moth is one of our most beautiful species.

One other insect, to which we just now referred, is one of which we do not know the name, as we have only seen it in its larval state.

On the 27th of June, 1868, about a pint of larvæ were sent us by Mr. Wm. Magrath, of Erindale, Credit, which he had taken from the roots of his hop-plants. They fed upon the crown of the root, at its junction with the stem, and ate out a roundish cavity in it;