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THE POLYPHEMUS MOTH—Telea Polyphemus.

BY THE EDITOR.

The caterpillar of this insect is also known as the American Silk Worm, in consequence of its having been extensively reared for the sake of its silk. When full grown the larva presents the appearance shown in

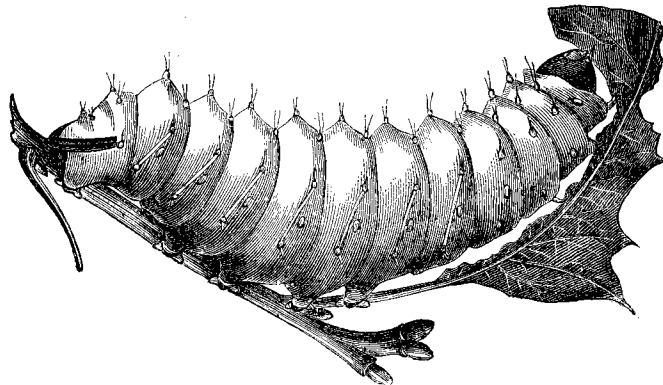


Fig. 4.

figure 4, is over three inches in length, with a very thick body. It is of a handsome light yellowish-green color, with seven oblique pale yellowish lines on each side of the body; the segments, which have the spaces between them deeply indented, are each adorned with six tubercles, which are sometimes tinted with orange and have a small silvery spot on the middle, and from each one of which arise a few hairs. The head and anterior feet are pale brown, the spiracles pale orange, and the terminal

segment bordered by an angular band resembling the letter V, of a purplish-brown color.

When mature the caterpillar proceeds to spin its cocoon within an enclosure usually made by drawing together some of the leaves of the tree it has fed upon, some of which are firmly fastened to the exterior of the structure. The cocoon, fig. 5, is a tough pod-like structure, nearly oval in form and of a brownish-white color, and within it the larva changes to an oval chrysalis of a chestnut brown color, represented in fig. 6.

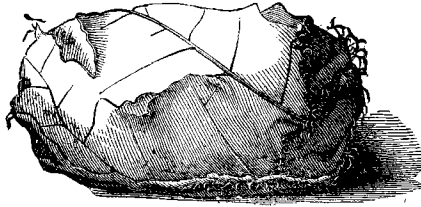


Fig. 5.

Usually the cocoons drop to the ground with the fall of the leaves, and in this state the insect passes the winter.

Late in May or early in June the prisoner bursts its prison house, when there is revealed a large and most beautiful moth, the male of which is well shown in fig. 8, p. 44, the female in fig. 9, p. 45. The antennæ are feathered in both sexes, but more widely so in the male than in the female. The wings, which measure when expanded from five to six inches across, are of a rich buff or ochre yellow color, sometimes inclining to pale grey or cream color, and sometimes assuming a deeper, almost brown color. Towards the base of the wings they are crossed by an irregular pale white band, margined with red; towards the outer margin is a stripe of pale purplish white, bordered within by one of deep, rich brown. Near the middle of each wing is a transparent eye-like spot, with a slender line across the centre; those on the front wings are largest, nearly round, margined with yellow, and edged outside with black. On the hinder wings the spots are more eye-like in shape, are margined with yellow, with a line of black edged with blue above, and the whole set in a large oval patch of rich brownish-black, the widest portion of the patch being above the eyespot, where also it is sprinkled with bluish atoms. The front edge of the fore wings is grey.

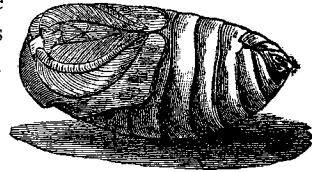


Fig. 6.

This lovely creature flies only at night, and when on the wing is of such a size that it is often mistaken in the dusk for a bat. Within a few

days the female deposits her eggs, glueing them singly to the under side of the leaves, usually one only on a leaf, but occasionally two or even three may be found on the same leaf.

The egg is about one-tenth of an inch in diameter, slightly convex above and below, the convex portions whitish, and the nearly cylindrical sides brown. Each female will lay from two to three hundred eggs, which hatch in ten or twelve days.

This insect is subject to the attack of many foes, particularly while in the larval state. A large number fall a prey to insectivorous birds, and they also have insect enemies. A large ichneumon fly, *Ophion macrurum*, see fig. 7, is a special and dangerous foe. This active creature may often be seen in summer on the wing, searching among the leaves of shrubs and trees for her prey. When found she watches her opportunity, and places quickly upon the skin of her

victim a small, oval, white egg, securely fastened by a small quantity of a glutinous substance attached to it. This is repeated until eight or ten eggs are placed, which in a few days hatch, when the tiny worms pierce through the skin of the caterpillar and begin to feed on the fatty portions within. The *Polyphemus* caterpillar continues to feed and grow, and usually lives long enough to make its cocoon, when, consumed by the parasites, it

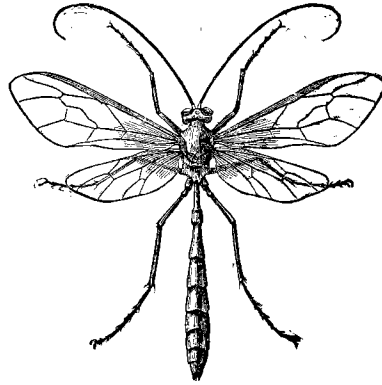


Fig. 7.

dies; in the meantime the ichneumons having completed their growth, change to chrysalids within the cocoon, and in the following summer in place of the handsome moth there issues a crop of ichneumon flies. It is also subject to the attacks of another parasite, a tachina fly. Should the insect ever appear in sufficient numbers to prove troublesome, it can be readily subdued by hand-picking. This larva feeds on a variety of trees and shrubs, such as plum, oak, hickory, elm, basswood, walnut, maple, butternut, hazel, rose, &c.

As this moth has been found to be easily propagated, extensive experi-

ments have been tried with the view of producing silk for commercial purposes from the cocoons. The silk is rather coarser than that of the

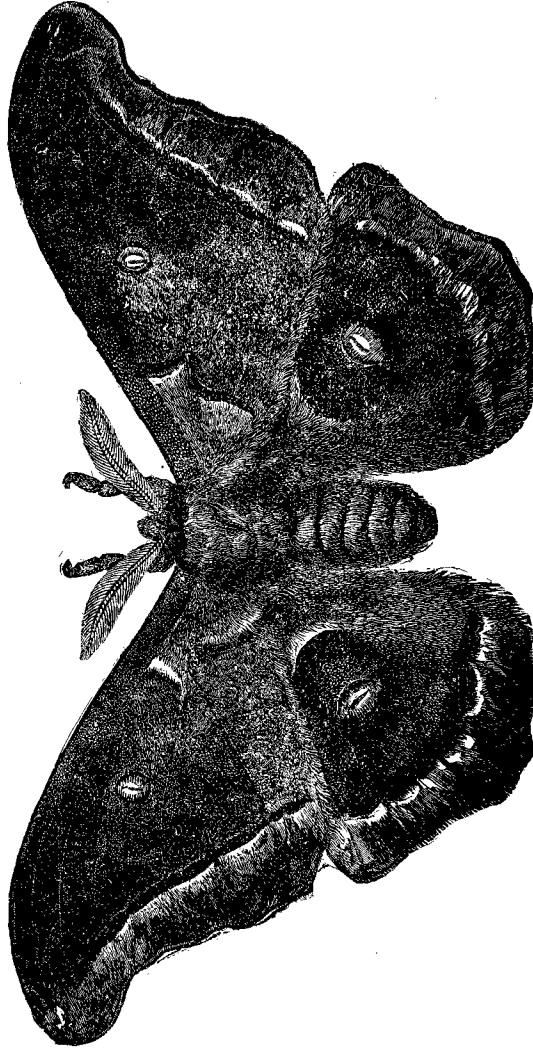
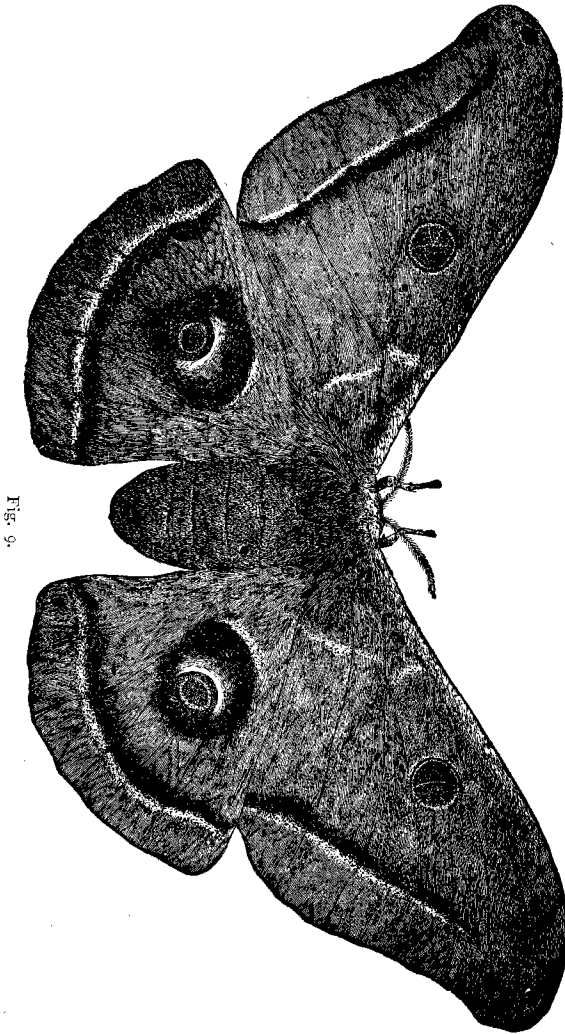


FIG. 8.

common silk worm, *Bombyx mori*, has a continuous thread, and can be readily unwound. A measure of success has attended these efforts, but

not sufficient, it appears, to secure their continuance, and we know of no one now raising these larvæ for the purpose of obtaining silk for com-



merce. The insect has also been introduced into France with a similar object, but with what success we have not learned.