

## Entomology.

## Destructive Insects.

All eyes should now be turned to the fruit and shade trees, as well as to the vegetables. Every tree has destructive insects, and every insect has its parasite. Most insects are partial to certain kinds of plants, but there are others which show little partiality. One year is no guide to another in the destructive work of insects, as they appear and disappear in constant succession, frequently new forms springing into life. In addition to those already illustrated in the ADVOCATE, we herewith present a cut of the Cecropia Moth, fig. 1, and the Apple-leaf Aphis, fig. 2, both of which have caused considerable alarm among fruit growers.

## THE CECROPIA MOTH.

The wings of this insect are brown, the anterior being greyish tinged with red, measuring, when extended, five to seven inches across. The cocoon—an ovoid, greyish pod about three inches by one inch in size, will be found attached to the twigs of trees and shrubs, especially the apple tree.

Here the chrysalis hibernates, and the moth bursts out about the first of June, sometimes earlier. It then matures very rapidly, and the female lays her eggs on the underside of the leaves, fastening them firmly with a glutinous substance. The egg is nearly round, about one-tenth of an inch long, and has a creamy-white color. In a week or two the larva, a knobby-black creature, eats through the shell, and feeds in the leaves, rapidly assuming different forms until it becomes three or four inches long and about an inch thick, the body being distinctly segmented and the color a pale green. Reddish processes appear on the third and fourth segments, the tubercles on the back being mostly yellow. It now eats very ravenously, the loss of foliage being often great, endangering the life of the trees.

Insectivorous birds are the most natural remedy; but there are also numerous parasitic insects which assist in their extinction, especially the long-tailed ophion, the Cecropia chalcid fly, and another Ichneumon-fly called *Cecropia cryptus*. The most practical remedy is to pull the cocoons or pods from the trees in winter and destroy them. The larvæ may also be picked from the leaves by hand.

## THE APPLE TREE APHIS.

This insect is also known as the Apple-leaf Aphis, but is popularly called the Apple-louse; but no plant appears to be free from its ravages. The black eggs of these lice, deposited the previous autumn, colonize during winter in the crevices of the bark, and around the base of the buds. This insect is exceedingly prolific. It has a sharp, slender beak, with which it penetrates all parts of the tree in quest of juices. The young louse is almost white, but gradually changes to a greenish color. The mature female is usually wingless, as seen in the cut. These lice have been named "ant's cows," from the fact that ants take them prisoner, and feed on a liquid secretion which they exude.

day appearing after the eggs are hatched will destroy myriads of them.

## THE CURCULIO.

This is the Latin name of a beetle meaning plum insect, and corresponds to the Anglo-Saxon word weevil. It attacks almost every species of fruit. It is grayish or blackish in color, has a rough appearance, and is about one-fifth of an inch long. The female lays her eggs on the young fruit. In warm weather the larva, a small, soft, footless grub, hatches out in a few days, feeding on the flesh of the fruit and boring its way into the core. Its length is about two-fifths of an inch, and is of a bright, yellowish-white color. The grub matures in about a month. The irritation of the grub causes the fruit to fall before it is mature, the

larva maturing in the fallen fruit. The grub then leaves the fruit, burying itself in the ground, when it changes into the chrysalis, and from three to six weeks afterwards the beetle appears, escaping through the surface of the soil.

The most effectual remedy is to jar the trees, small ones with the hand and large ones tapped sharply with a mal-

let padded with cloth, continuing the process every morning and evening for three or four weeks after blossoming. A large sheet should first be placed under the tree, on which the beetles fall, when they, as well as the fallen fruit, should be destroyed. Turning hogs, poultry or sheep into the orchard is a good plan. Burning tar or sulphur under the trees has also been recommended. Spraying the plum trees with Paris green (three ounces to forty gallons of water), when the plums are about the size of peas, has had a good effect.

## THE CODLING MOTH.

This is a small prolific and destructive insect. It attacks the apple, plum, pear, crab and peach. Three to four broods appear each season, the early one appearing about the time of blossoming. The fore wings are greyish brown, with variegated spots, the hind ones having a yellowish brown lustre. The female deposits her eggs in the eye of the young apple, rarely in the stalk end or on the cheek, the eggs hatching in a week, the larvæ boring into core. They attain maturity in three or five weeks, when the immature apple falls to the ground, the worm generally escaping before this. The larvæ of the apples which remain on

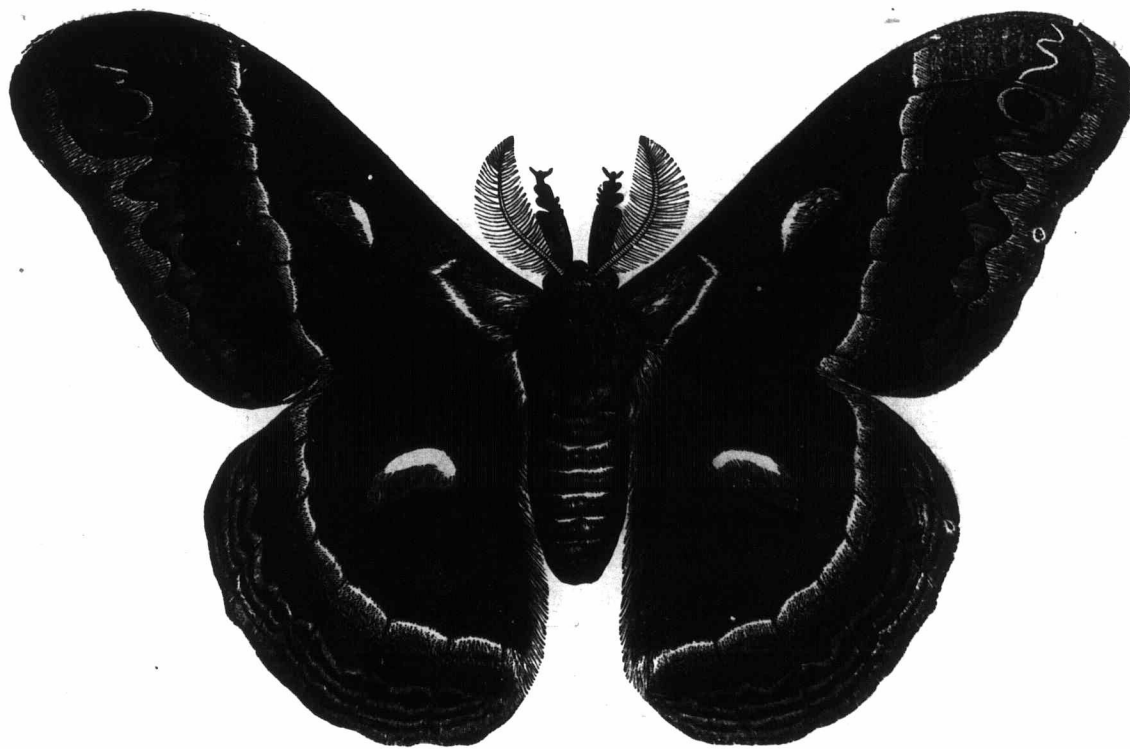


FIG. 1.—CECROPIA MOTH.

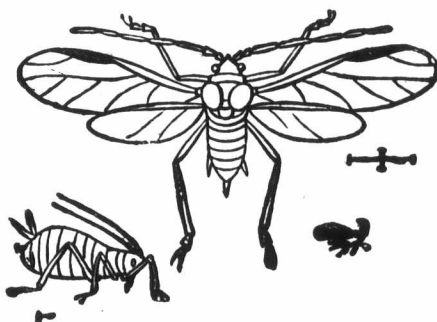


FIG. 2.—APPLE-LEAF APHIS.

Numerous remedies have been suggested and tried for the extermination of this louse plague. The chief parasite of these aphides is an insect known as the Lady-bird, of which there are several species. The dead bark may be peeled off in winter and the tree washed with a solution of soft soap and soda. At the time of budding, strong soap suds or weak lye may be syringed on the trees. A kerosene emulsion, tobacco water, or other fluid insect poisons sprayed on the trees have also proved effectual. Of the tobacco water one pound of rough stems may be boiled in a gallon of water. A cold