GARDEN AND ORCHARD.

INSECTS INJURIOUS TO THE PLUM.

(Continued.)

The Polyphemus caterpillar *(Telea Polyphemus)*, —*See Figs. 50, 51 and 52*—is described as "one of our handsomest insects" and also the progeny of one of the Emperor moths.

"The larva," says Mr. Saunders, "is about as thick as a man's thumb, of a greenish-yellow colour, and with the segments of the body very deeply cut into. These segments are covered with tubercles, which have clusters of small spines proceeding from them. Its history is very similar to that of the Sphinx which I have just mentioned. Instead, however, of forming a chrysalis under ground it spins a cocoon inside of two or three leaves of the tree on which it is feeding, which it draws together, and within this enclosure changes to the pupa state. This cocoon, being attached to the foliage, falls to the ground with the leaves in the autumn, remaining there until the following summer, when, in the early days of June, the large handsome moth is produced."

THE POLYPHEMUS CATERPILLAR—*Telea polyphemus.*

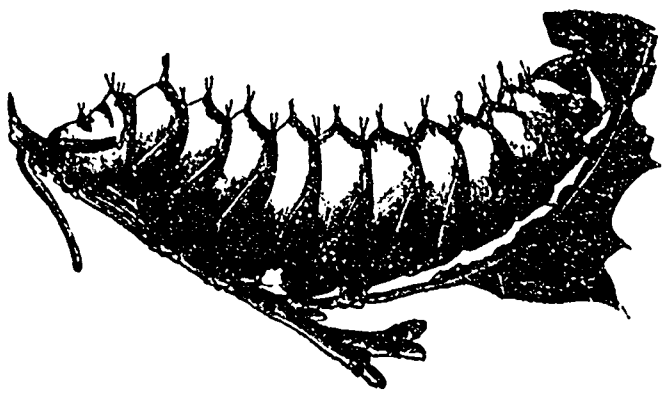

Fig. 50.

POLYPHEMUS MOTH.

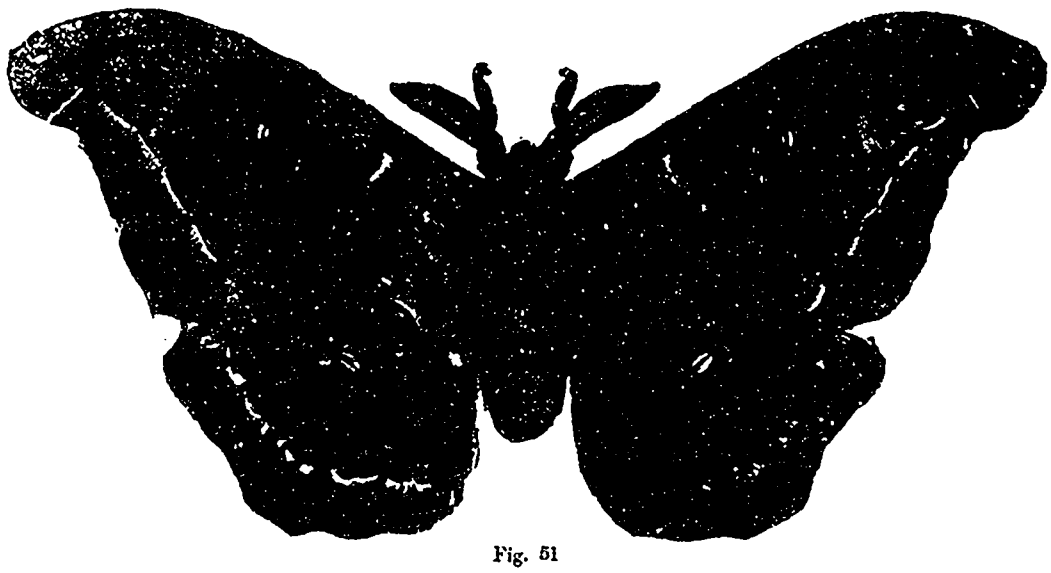

Fig. 51

Glancing a moment at the minute Eye-spotted Bud-moth *(Grapholitha oculana)*,—*See Figure 53*—a tiny creature found in the pear and occasionally in the apple, as well as the plum, and the Oblique-banded Leaf Roller *(Loxotænia rosaceana)*,—*See Figs. 54 and 55*—also somewhat promiscuous in its dietary, the next pest in order is the too-familiar Curculio (*Conotrachelus nenuphar*). *See Fig. 56.*) In this, as in some other cases—where it is necessary, to ensure distinctness, to magnify the illustration—the faint black lines represent the natural size of the insect. The Curculio is of the same family as, and not very unlike, the peabug. It is small in size, and of a rough gray or blackish colour, and when resting looks very much like a dried bud of the tree.

COCOON OF POLYPHEMUS MOTH.

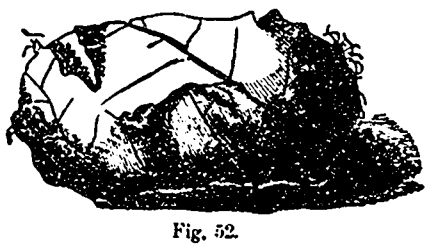

Fig. 52.

EYE-SPOTTED BUD MOTH—*Grapholitha oculana.*

Fig. 53—Larva and perfect insect.

OBLIQUE-BANDED LEAF ROLLER, LARVA, AND MOTH—*Loxotænia rosaceana.*

Fig. 54. Fig. 55.

THE CURCULIO—*Conotrachelus nenuphar.*

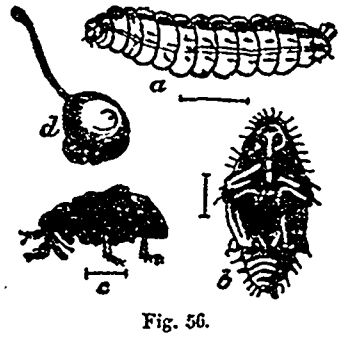

Fig. 56.

Its life history and habits, and the readiest and most efficacious known means for its destruction, are thus referred to by Mr. Saunders. He says:

"It usually passes the winter in the ground, in the chrysalis state, though the perfect insect sometimes escapes from the chrysalis, during the later autumn months, and then may be found under the bark hibernating in the winter. As soon as the trees are in blossom the curculios may be found in abundance upon them, waiting for the first signs of development in the young fruit. Before the blossoms have fairly left the tree, the tender fruit is detected by this watchful pest, which at once begins to deposit eggs in it. These shortly hatch into small grubs, which penetrate into the fruit, causing decay and premature falling. The jarring ought to be begun early in the year, while the trees are in blossom, and in this way a large proportion of the curculios may be collected before they have done any mischief; in fact, too much stress cannot be laid upon the recommendation to begin the jarring process quite early in the season.

"I have found them to be quite common on the trees at night, and by enclosing specimens in boxes covered with black cloth, so that no light could get in, have found them to deposit eggs notwithstanding the darkness. They are active during the day, and seem to be almost as active at night. Their periods of inactivity, if they have any, seem to be about the cool of the morning or early in the evening. I do not know whether they keep hard at work during the entire season, but presume that, if the weather were cold, they would remain torpid during a portion of the day or night. I consider the jarring method quite sufficient as a remedy to keep the insect in check, when faithfully followed."

Placing under the trees chips in which the curculios may take refuge only to be captured; paving the ground around the trees, so that the curculios, when they fall with the fruit, may have no hiding place, and be forced to wander about until destroyed; burning coal tar under the trees; gathering up the fallen fruit and destroying it with its occupant; enticing the curculios into bottles filled with some sweet liquid, and placing elder branches in the trees, may all have some value, but systematic jarring is the simplest and by far the most effectual remedy.

In Essex, however, Mr. Dougall and others claim to have effectually protected their plum-orchards from the curculio by keeping chickens.—*Report of the Ontario Agricultural Commission.*

A NEW SCHEME.

It is a well known fact to all fruit-growers, that certain varieties of apples, pears and plum trees produce very heavy crops on alternate years, but very light crops on the succeeding ones. In fact, some kinds of fruit trees cannot be relied upon to produce any crops on certain years. The odd years are the fruitful ones for some kinds of trees, and the even years for others. Mr. Douglas, of Waukegan, has recently called attention to the fact that nut-producing trees bear bountifully some years, and very sparingly, if at all, the succeeding seasons, although there are years peculiarly favourable or unfavourable to the production of fruit. Trees that produce very large crops one year, appear to suffer a drain on their vitality, so that one season is required in which to recuperate. It often happens that nearly all the trees in an orchard are of a few varieties that bear the same year. The owner had an abundance of fruit that season, but little or none the next. Various attempts have been made to change the so-called "bearing years" of fruit trees, so as to produce heavy crops in those seasons when there is generally a failure. David Flanders, of Sing Sing, N.Y., thinks he has discovered a process for securing this result, and like most persons who have a new idea on a practical subject, has obtained a patent on it. This process consists in applying to the blossoms of the trees, in the spring of the bearing years, by sprinkling or otherwise, an acid or alkaline solution of sufficient strength to arrest the development of the blossoms or destroy their vitality, and to cause them to gradually fall off. The solution, of whatever kind, is so dilute that it will not injure the foliage or branches of the trees that are so treated.