

FARM AND FIELD.

THE PEA WEEVIL—(*BRUCHUS PISI*.)

This insect is a comparatively recent importation, and at the present time a source of great loss and injury to the agriculturist. It has not only rendered the pea crop nearly valueless to the home consumer, but it has well-nigh destroyed a profitable trade in seed peas carried on with the States. (See Fig. 23.) The following description is given of the pea bug by Mr. Bethune:—

"It is a very remarkable creature in its habits. The parent insect is a little beetle, which deposits its eggs in the blossom of the pea, just before the petals fall. The egg hatches out a little worm which penetrates down inside of the growing pod, fastens upon and enters the young pea. The hole which it makes when entering the pea is completely filled up by the subsequent growth, consequently when the pea is ripened the insect is found inside without any visible aperture at all, and the wonder to the ordinary observer is, how the creature ever got there. The pea develops in the ordinary way, and seems to grow as large as usual, but, of course, is very deficient in weight. The insect does not eat away the whole interior of the pea, but simply a hole in it, in which it goes through all its transformations. When it arrives at the stage of the perfect beetle, it gnaws its way through, flies away, and appears again to lay the eggs for the next crop of insects. I have no doubt these insects are eaten very often in peas which are brought to the table, but having fed upon nothing but the pea, they have no taste, and do harm to nobody."

Numerous references have been made to this pest in the course of the inquiry. Mr. Brodie says of it:—

"The pea weevil is rapidly moving northward and westward. In the vicinity of Toronto, in favourable seasons, there are two broods. From close personal observation, I am quite sure of this. I have been assured by careful observers that there are two broods in the townships south of London, so that the expedient of early or late sowing is of little avail. So rapidly is this insect increasing in the county of York, that unless some remedy is applied, farmers will have to give up the cultivation of peas."

Mr. Hobson, of the county of Wellington, says:—

"We have not grown many peas lately, on account of the pea bug. There is a bug to each pea. The only remedy I know of for this pest is to stop growing peas altogether for two or three years. I was told by Mr. Renton that it was very bad in Wentworth about twenty years ago, and that the farmers generally gave up growing it for two years, and the result was that the bug was destroyed. I don't think there is any other remedy."

Mr. Bethune suggests some remedies, of which one is the following:—

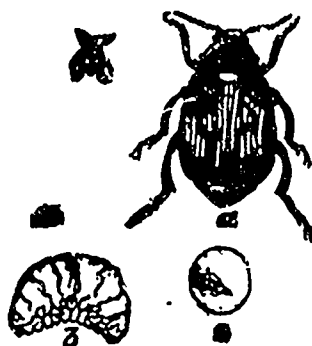
THE PEA WEEVIL, OR PEA BUG—*Bruchus pisi*.

Fig. 23.

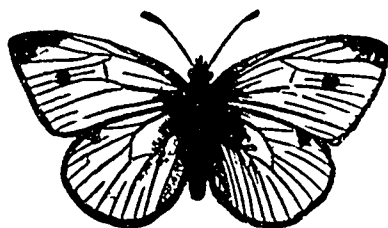
THE CABBAGE BUTTERFLY—*Pieris rapae*.

Fig. 24.



Fig. 25.

THE ZEBRA CATERPILLAR—*Mamestra picta*.

Fig. 26.

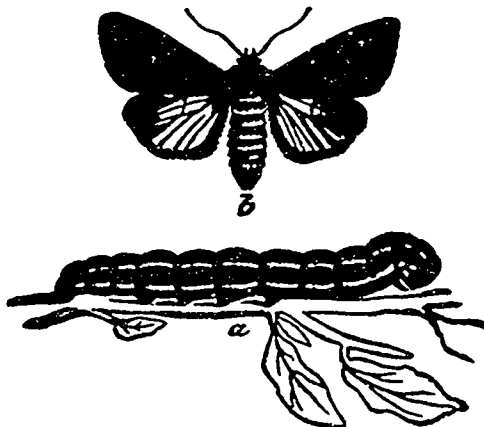


Fig. 27.

Fig. 24 shows the male; Fig. 25, the female; and Fig. 26, (a) the larva, and (b) the chrysalis.

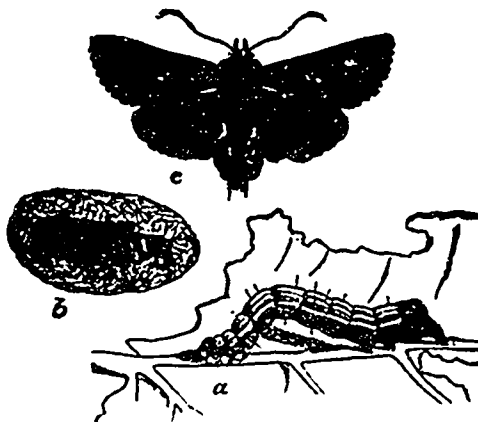
THE CABBAGE PLUSIA—*Plusia brassicae*.

Fig. 28.

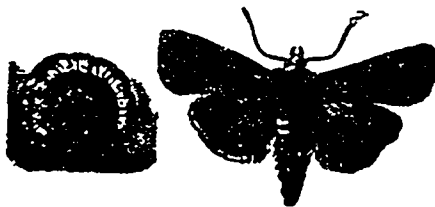
THE CUT-WORM—*Agrotis messorcia*.

Fig. 29.

Fig. 29 shows the larva and moth of the dark-sided cut-worm (*Agrotis messorcia*), one of our commonest species.

THE HARLEQUIN CABBAGE BUG—*Strachia histrionica*.

Fig. 30.

"One remedy, which I have seen practised to avert it, is to keep the seed peas, if they are observed to be infested at all, over the year in tight vessels. The peas, for instance, are gathered this year, and next year the beetle would mature and come out of them, and being unable to escape from the vessel it would die. There would be no place to lay its eggs, or, if any eggs were laid, they would be valueless. If these peas were sown the following year, many of them would probably die, but a very large proportion would retain their vitality and germinate, and the ensuing crop would be entirely free from the bug."

This is obviously only a partial remedy, and its complete success depends upon the chance that the bug has left the pea in a vital and germinating condition. But it is probably a safer measure than the next suggestion, which is as follows:—

"Another remedy is to pour water which has been heated almost to the boiling point over the peas, a few seconds' exposure to the water sufficing to kill the insect, but not the vital part of the plant. This method of treatment, however, would have to be carried out with a great deal of care. I have noticed that a very large number of the infested peas will float on the water, while the uninfested ones will sink to the bottom, during a brief immersion. The sound peas might in this way be roughly separated from the unsound, but it would not be a complete mode of separation, as in many cases only those in which the greater portion of the interior had been eaten out would float."

It is, however, stated that by placing the peas in a warm room the insects will be prematurely hatched into life, come forth from their holes in the peas, and, finding no means of sustaining life, will die, the peas being then used as seed without danger of propagating the pest.

As is very usual in face of obvious danger, there is a call for legislation to avert the calamitous consequences the total destruction of the pea crop would entail. In Kent the bug has been known for twenty years, probably gathering in numbers all the time, and yet there does not seem to have been any concerted action, any deliberation, or effort, to provide remedies. Mr. White says:—

"There is no hope of getting rid of it, in my opinion, until the people are compelled to quit sowing peas."

The Cabbage Butterfly (*Pieris rapae*) was first seen in Quebec in 1859. (See Figs. 24, 25 and 26.) It is supposed to have taken passage in an Allan steamer, and now is found over a large portion of the Dominion and United States. In numbers it is very destructive to the cabbage plant, and it is exceedingly prolific. On this point Mr. Bethune remarks:—

"There is, unfortunately, a constant succession of broods; we find