

it forms an oblong oval cocoon of a gummy substance, covered with particles of earth and portions of the stalks of the vines, and here awaits transformation into a chrysalid. Fig. 97 gives a representation of one of these cocoons with the chrysalid inside it. According to Dr. Harris, the chrysalid is of a shining bay colour, and the edges of the abdominal segments are armed with transverse rows of short teeth. By means of these little teeth, the chrysalid just before it is about to be transformed to a winged insect, works its way out of the cocoon, and the shell of the chrysalis is left half emerging from the orifice after the moth has escaped from it.

FIG. 97.



FIG. 98.



The perfect moth (Fig. 98) is a very pretty object. Its body, which is about half-an-inch in length, is orange coloured or tawny, with four or five black dorsal spots. The forewings are opaque olive brown, and expand about one inch and a quarter. The hind wings are quite transparent, except the margins. The hind legs are densely fringed with long orange-coloured and black hairs. The moth deposits its eggs on the vines, close to the roots. It should be caught and destroyed whenever practicable. Search should also be made for the eggs, or when any plant appears to droop, the larva should be sought for, and, if possible, killed.

## 2. THE SQUASH BUG (*Coreus tristis*, De Geer).

Order, HEMIPTERA; Family, CORISÆ.

FIG. 99.



This common and well known insect is very destructive to squashes. Its habits have been so well described by the late Dr. T. D. Harris, that for the benefit of our Canadian agriculturists we have quoted him at some length. Fig. 99 represents the insect.

About the last of October squash-bugs desert the plants upon which they have lived during the summer, and conceal themselves in crevices of walls and fences, and other places of security, where they pass the winter in a torpid state. On the return of warm weather, they issue from their winter quarters, and when the vines of the squash have put forth a few rough leaves, the bugs meet beneath their shelter, pair, and immediately afterwards begin to lay their eggs. This usually happens about the last of June or the beginning of July, at which time, by carefully examining the vines, we shall find the insects on the ground, or on the stems of the vines close to the ground, from which they are hardly to be distinguished on account of their dusky colour. This is the place where they generally remain during the daytime, apparently to escape observation; but at night they leave the ground, get beneath the leaves, and lay their eggs in little patches, fastening them with a gummy substance to the under-side of the leaves. The eggs are round, and flattened on two sides, and are soon hatched. The young bugs are proportionally shorter and more rounded than the perfect insects, are of a pale ash colour, and have quite large antennæ, the joints of which are somewhat flattened. As they grow older and increase in size, after moulting their skins a few times, they become more oval in form, and the under-side of their bodies gradually acquires a dull ochre-yellow colour. They live together at first in little swarms or families beneath the leaves upon which they were hatched, and which, in consequence of the numerous punctures of the insects, and the quantity of sap imbibed by them, soon wither, and eventually become brown, dry and wrinkled, when the insects leave them for fresh leaves, which they exhaust in the same way.

As the eggs are not all laid at one time, so the bugs are hatched in successive broods, and consequently will be found in various stages of growth through the summer. They, however, attain their full size, pass through their last transformation, and appear in their perfect state, or furnished with wing-covers and wings, during the months of September and October. In this last state the squash-bug measures six-tenths of an inch in length. It is of a rusty black colour above, and of a dirty ochre-yellow colour beneath, and the sharp lateral edges of the abdomen, which project beyond the closed wing-covers, are spotted with ochre-yellow. The thin over-lapping portion of the wing-cover is black, the wings are transparent, but are dusky at their tips, and the upper side of the abdomen, upon which the wings rest when not in use, is of a deep black colour, and velvety appearance. On the back part of the head of this bug, and rather behind the eyes, are two little glassy elevated spots, which

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