

The Chrysalis.—This is the stage in which many insects pass the winter, and as they cannot move during this stage, they are very much more at our mercy, provided we know their life-histories and habits. Insects in a state of nature are very little affected by cold. Some chrysalids, although only protected by a few threads of silk, will pass the winter safely; but if this slight covering be in any way interfered with they will perish if exposed to the elements. Owing to this, many species which pass the winter beneath the surface of the ground can be destroyed by late fall ploughing. This treatment has been very successfully practised with regard to the Canker-worm. Not only are the chrysalids thrown up to the surface, where they are eaten by birds and animals, but the cells which they have prepared as winter quarters being disturbed and broken, they are killed by the frost. Fig. 26 shows the chrysalis of the male White-spot Tussock-moth.

The Perfect Insect.—Many insects, when they have reached maturity, do not commit any harm, and unless we know their life histories we do not recognize them as the enemies which, under another form, in their preparatory stages, had decimated our crops. At the same time it frequently happens that in this harmless state they may be destroyed much more easily than when in their hurtful form. Most moths and many beetles are greatly attracted by light, and this has been taken advantage of to destroy large numbers of our enemies.

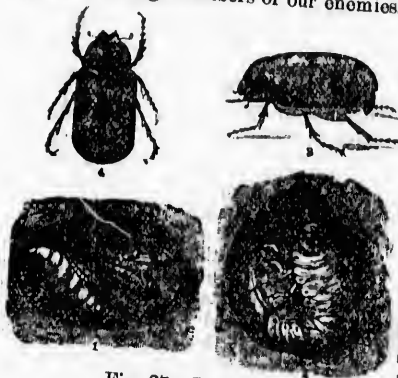


Fig. 27—June Bug.
Lachnosterna fusca, Fröhl.

Showing grub, pupa and beetle. Insects within bounds, is beating or jarring trees while they are at rest. This remedy is the most reliable means of fighting the Plum Curculio. A stout iron spike should be driven into the tree where the branches start out from the trunk. A blow upon this with a metal hammer produces the sharp concussion necessary to make the Curculio loosen its hold of the tree and fall to the ground, where it can be destroyed. Beating foliage has a like effect for some insects, and many species will be found to have favourite kinds of trees upon which to rest. For instance, the June-bug will rest on the cherry and plum in preference to all other trees.

This brings us to the end of Active Remedies. But there is another large class which I have referred to as Preventive Remedies. These may be divided under two heads: 1st. Agricultural or Scientific Preventives; 2nd. Active Preventives.

It is an old and time-honoured saying that "prevention is better than cure," and this is perfectly true with regard to our present subject. Whatever success we may obtain by the use of insecticides and hand-picking, undoubtedly the remedies of the greatest use are those which prevent the attack from beginning at all.

First amongst agricultural preventives, of course, is high culture, by which a