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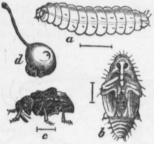


Fig. 55.

to destroy it. With the view therefore of directing special attention to the losses resulting from neglect of the remedies at hand, I shall as briefly as possible review the whole subject of this insect and its work, as well as the remedies which have been suggested for it. This insect was first described by Herbst, a German Entomologist, as early as the year 1797. It is a foreign aggressor but the date of its introduction is not known. It is thus ably described by Dr. Harris, in his "Insects Injurious to Vegetation," a work that should be in the hands of every fruit-grower and agriculturist:

"This weevil, or curculio as it is often called, is a little rough, dark-brown or blackish beetle, looking like a dried

bud when it is shaken from the trees, which resemblance is increased by its habit of drawing up its legs and bending its snout close to the lower side of its body, and remaining for a time without motion, and seemingly lifeless. It is from threetwentieths to one-fifth of an inch long, exclusive of the snout, which is rather longer than the thorax and is bent under the breast, between the fore legs, when at rest. Its colour is dark-brown, variegated with spots of white, ochre-yellow and black. The thor ax is uneven; the wing covers have several short ridges upon them, those on the middle the of back forming two considerable humps of a black colour, behind which there is a band of ochre-yellow and white. I have found these beetles as early as the 10th of March, and have frequently caught them flying in the middle of the day. They begin to sting the plums as soon as the fruit is set, and continue their operations till the middle of July, or as some say, until the first of August. In doing this the beetle first makes a small crescent-like incision with its snout in the skin of the plum, and then turning round, inserts an egg in the wound. From one plum it goes to another until its store of eggs is exhausted, so that where these beetles abound not a plum will escape being stung." is some difference of opinion among Entomologists as to the number of broads matured in a season, but I think that with us there is but one brood, and these the result of insects emerging from the ground in early spring.

Its relation to fruit culture is very intimate, and the whole aspect of fruit growing is affected more or less by the existence of this troublesome foe, to the great discouragement of plum, apricot and nectarine culture, estimable fruits where they can be successfully grown. We cannot, as some have done, tolerate this insect as a serviceable thinner of the fruit, for we have found it to be a most relentless destroyer. The female insect makes a crescent shaped incision in the fruit and deposits there a tiny egg which soon hatches; the young and tender grub at once works its way to the germ of the fruit and revels in its nutritive juices. The seed germ being mutilated, a vital point is attacked, the fruit loosens its hold on the tree and soon falls to the ground. This is exactly what is needed by the larva for its development and subsequent escape. If the fruit had dried up and maintained its hold on the tree the grub would probably have perished. On the ground the fruit is kept cool and moist and as soon as the grub is fully grown it leaves the fruit and enters at once under the soil where it is shortly changed to a chrysalis and patiently

waits in obscurity its perfect development.

Its rapid increase is a matter of concern to all growers of the plum as it is spreading rapidly over every part of the Province where this fruit is grown. At a recent meeting of the Fruit Growers' Association of Ontario one of the members present observed that "A few years ago there were no curculios at Goderich, now they are there in full force; and plum growers are discouraged. It is not yet at Owen Sound, but it will be by and by." Thus it is gradually widening its field of operation and annually increasing in numbers. On my own grounds as well as on those of my neighbours, this fact has been painfully evident during the past year; not a tree has escaped, and even the peach, cherry, pear and apple were attacked.

So far as we know in this country the curculio is almost exempt from the attacks of insect enemies. In the report of the Entomological Society for 1876 mention is made c. two parasites which have been discovered by Prof. Riley operating on this insect in