

These spots become so hard and gritty that they are likely to break one's teeth if an attempt is made to bite through them.

The second injury is caused by the early feeding habits of the first generation of beetles, that is the over-wintered beetles. Both males and females during the egg-laying season feed upon the fruit, eating out little holes of about 1-24th of an inch or a little more in diameter. In our observations these feeding punctures were not nearly so numerous as the crescent-shaped cuts, but several investigators have found them quite as numerous. These punctures, too, seem to lead to the same kind of deformities in apples and pears as we have described above.

The third injury is the dropping of most of the infested fruit. If the larva, or grub, that hatches from the egg lives, practically all kinds of fruit except cherries drop prematurely. Fortunately not only does a very large percentage of the eggs fail to hatch, but also a great many of the larvæ themselves die in the fruit soon after hatching, so that these two things lessen the total amount of dropping. Premature falling of fruit extends over a period of more than a month, but most of it takes place before the apples are more than about one inch in diameter. On some trees sprayed for Codling Moth we found over 90% of all the early drops were due to the Curculio. When the fallen fruit was cut through, it was seen that the grubs by the time they were mature had eaten large areas inside, as large and as unsightly in many cases as those caused by the Codling Moth larvæ. The infested cherries, which, as has been said, remain on the trees, usually become sunken and darkened on one side, thereby clearly revealing the work of the insect. Cherries containing the Cherry Fruit-fly larvæ do not always have some outward manifestation of the presence of an insect.

A fourth injury is caused by the late summer and autumn feeding of the new generation of beetles. This injury is common on apples and peaches, but rare on other fruits. On the apple the beetle eats a small, round hole through the skin, and then inserts its long proboscis and excavates the flesh as far as it can reach. The result is a small, circular, brown area on the surface with a hole in the centre and a cavity beneath. Sometimes the beetles work