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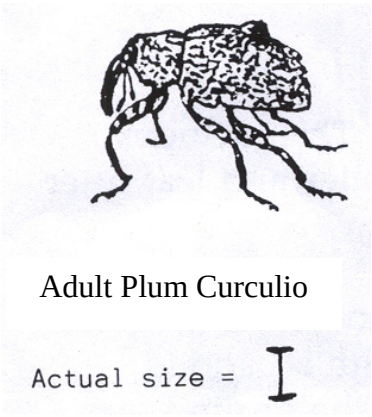
Plum Curculio

Conotrachelus nenuphar

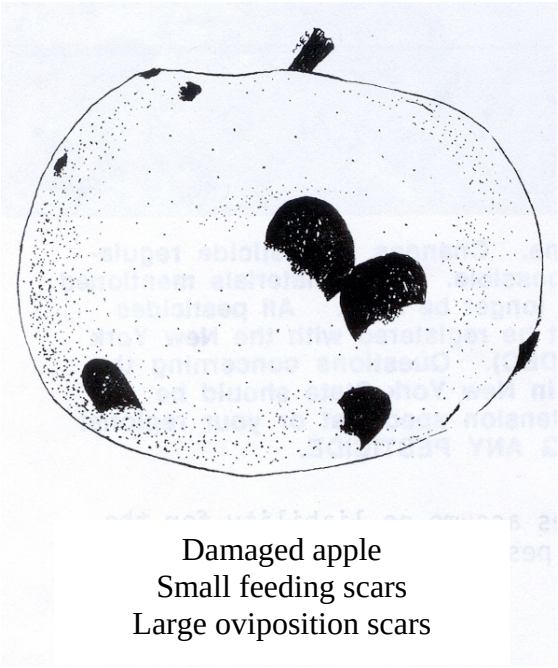


Adult Plum Curculio

Injury. The plum curculio (PC) is a serious pest of plums, prunes, cherries and apple in New York. It also attacks apricot, nectarine, pear and quince as well as wild plum, hawthorn and native crabapples. This insect is most abundant in orchards adjoining hedgerows and woodlands that offer shelter or overwintering adults. Both feeding and egg laying scars result in russeted areas on the surface of the fruits. The crescent-shaped scar from oviposition is useful in diagnosing damage from this pest. Severely injured fruits become misshapen. Infested fruits often drop early and with smaller fruits, such as cherry, the entire fruit may be ingested by the larva.

Description. The adult PC is a small 1/5 inch (6mm) snout beetle mottled with black, gray and brown. The beak or snout is ¼ the body length and sharp biting jaws are located at the tip of the snout. The larva is a grayish-white, legless, slightly curved grub, about 1/3 inch (8mm) long. Larvae are found inside fruits.

Life history. The adults pass the winter hidden under leaves, along fence rows, in brush piles, rock walls and in other protected places. In spring when the weather warms up (mean temperature 60° F. or maximum temperature above 75° F.), about the same time apples are blooming, the adults become active.



Damaged apple
Small feeding scars
Large oviposition scars

Emerging from overwintering quarters they feed on buds, blossoms and newly set fruit. The beetles attack the fruits as soon as they appear, usually at the shuck split in stone fruit. Some feeding injury occurs consisting of small round openings in the skin extending about 1/8 inch into the pulp. The oviposition damage occurs as the female cuts through the skin and deposits a tiny white egg in the opening that she pushes to the bottom of the cavity with her snout. In front of the egg cavity she cuts a crescent-shaped slit that extends obliquely under the egg to leave it in a flap of flesh. Each female is capable of depositing from 100 to 500 eggs. The larvae develop in the fruits where they feed for several weeks before reaching maturity. Infested fruits may drop from the tree early. Mature larvae leave the fruit and crawl into the soil to a depth of several inches where they construct earthen pupal cells. During July and August, the new brood of adults begins to emerge. They feed on developing fruits until low fall temperatures force them into hibernation. There is one generation of this insect in New York State each year.

Management. The first step should consist of removing hibernating shelters. This includes cleaning up overgrown fencerows, hedges, and removing brush piles and leaf litter under which the beetles might hibernate.

Pick up and destroy dropped fruit in early June.

A mechanical method of control known as jarring is also sometimes used. Results with this method are varied. If a tree is suddenly jarred with a padded mallet, the beetles loosen their hold, contract their legs and fall to the ground feigning death for a considerable time. The jarring should be done in early morning. Place sheets on the ground under the trees. This will enable the grower to collect the beetles and then destroy them.

Note: Young trees can be severely damaged if hit too hard.

For stone fruits (peaches, nectarines, cherries, plums, prunes and apricots) treat at petal fall and 10 days later. Use Imidan or methoxychlor or a multipurpose fruit tree mixture.

For apples and pears make application at petal fall and ten days later. Imidan, methoxychlor or multipurpose mixture are recommended. In Eastern New York State a third application is needed, 10 days after the second. These applications also control first generation codling moth and oblique banded leafroller as well as European apple sawfly.

1/1977 Prepared by Carolyn Klass
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