



CORNELL COOPERATIVE EXTENSION - SUFFOLK COUNTY

INSECT AND PLANT DISEASE DIAGNOSTIC LABORATORY

EDUCATION CENTER
423 GRIFFING AVENUE
RIVERHEAD, NY 11901
HORT INFO LINE 631.727.4126



Cornell University
Cooperative Extension
of Suffolk County

BAYARD CUTTING ARBORETUM
MONTAUK HWY. PO BOX 463
OAKDALE, NY 11769
HORT INFO LINE 631.581.4223



Plum Curculio *Conotrachelus nenuphar*

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.



Fig. 1. An adult plum curculio on a plum fruit. Note the round feeding hole and the crescent shaped oviposition scar below the hole (Photograph Clemson University - USDA Cooperative Extension Slide Series, www.bugwood.org)

Description: The adult PC is a small 1/5th inch (3cm) snout beetle (**Fig. 1**), mottled with black, gray and brown. The beak or snout is 1/4 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 (**Fig. 2**), about 1/3 inch (8 mm) 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 degrees F or maximum temperature above 75 degrees F, about the same time apples are blooming, the adults become active. 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 which 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 each year.



Fig. 2 A plum curculio larva. Note the brown granular frass produced by the larva. (Photograph Clemson University - USDA Cooperative Extension Slide Series, www.bugwood.org)

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

Pick up and destroy dropped fruit in June and early July.

Jarring, a mechanical method of control, is sometimes helpful; results may vary. If a tree is suddenly jarred with a padded mallet, plum curculio beetles loosen their hold, contract their legs and fall to the ground. Jarring should be done in the early morning. Place sheets on the ground to collect beetles and then destroy them. *Note:* Young trees can be severely damaged if hit too hard.

For plums and prunes: Apply kaolin clay (for suppression) or a multipurpose spray with pyrethrins plus PPB when shucks start to split and at first and second cover.

For peach, apricot, & nectarine: Apply kaolin clay (suppression only), permethrin, or a multipurpose spray containing malathion, or pyrethrins plus PPB labeled for plum curculio control at shuck split and 10 days later. See labels to determine which crops a particular pesticide can be applied to; not all pesticides are labeled for all three crops.

For apples: Apply malathion, permethrin, or a multipurpose spray labeled for plum curculio at petal fall, plus 10 to 14 days after petal fall. (In eastern New York, again two weeks later).

For cherry: Apply kaolin clay (for suppression) or a multipurpose spray containing malathion, or pyrethrins plus PPB that's labeled for plum curculio at shuck split and 10 days later.

Prepared by: Carolyn Klass, Senior Extension Associate, Entomology, Cornell University, 1/77.

4/91 Revised

Pesticide recommendations obtained from *2009-2010 Pest Management Around the Home Part II – Pesticide Guidelines*. Copies are available from Cornell Cooperative Extension – Suffolk County.

The Pesticide Management Education Program (PMEP), in cooperation with the New York State Department of Environmental Conservation (NYSDEC), maintains a web site with a searchable database for pesticide products currently registered in New York State. Individuals who have Internet access can locate currently registered products containing the active ingredients suggested above at <http://pmep.cce.cornell.edu/pims/current> (NYS PIMS).

This publication contains pesticide recommendations. Changes in pesticide regulations occur constantly, and human errors are still possible. Some materials mentioned may no longer be available, and some uses may no longer be legal. All pesticides distributed, sold, or applied in New York State must be registered with the New York State Department of Environmental Conservation (DEC). Questions concerning the legality and/or registration status for pesticide use in New York State should be directed to the appropriate Cornell Cooperative Extension specialist or your regional DEC office. Read the label before applying any pesticide.

TK: 1/2010 #165