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Plum curculio - *Conotrachelus nenuphar* (Herbst)

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Plum curculio (PC) typically migrates into orchards around bloom. The start of their movement from overwintering sites to orchards is most reliably linked with either a maximum daily temperature of 75°F for two to three days, or a mean daily temperature of 55°-60°F for three to six days. **Peak activity** and the **critical time for control** usually occur over 10 to 15 days beginning at petal fall. Females are mated before fruit set and are ready to lay eggs in fruit as soon as it becomes available. Egg laying can extend through June. The female deposits eggs under the skin of the fruit, leaving a crescent-shaped scar just below the egg-laying site. The hatching larva feeds inside of the fruit.

The adult beetle is about 5 mm long, and mottled brown with black, orange and white patches on the back. The wing covers are ridged and warty looking. Plum curculios have a downward curved snout that is about 1/4 to 1/3 of the body length. Mature larva is segmented and C-shaped, about 7 mm long, yellowish-white with a brown head capsule, and legless. Mature larvae drop from fruit and pupate in the soil to complete development. They emerge as adults in late June through August and remain in the orchard until harvest. Adults prefer the dense shade of the tree's inner canopy. In Michigan, this summer generation does not lay eggs until the following spring.

Monitoring: Traps can be used early in the season to capture curculios as they move into and around the orchard. After fruit is present, visually inspect several fruit per tree for signs of feeding or egg laying. Concentrate sampling on trees adjacent to hedgerows and woodlands, especially where damage has occurred in the past. Beating trays can be used to determine the presence of plum curculio.



Early-season varieties are considered most susceptible to both feeding and oviposition damage. As fruit mature, older oviposition scars take on a broad, fanlike appearance.



Adult beetle



Mature larva



Crescent-shaped scars from fresh egg-laying damage

Additional information

- For more monitoring information and evaluation of available pesticides:
 - **Michigan Fruit Management Guide**
 - **A Practical Guide to Scouting Apple Orchards** – a DVD showing how to scout apple orchards.
 - **MSU Diagnostic Services** for assistance in pest identification.
 - **MSU Fruit Crop Advisory Team Alert** newsletters for current pest/crop conditions.

This information was developed from **A Pocket Guide for IPM Scouting in Michigan Apples** by David Epstein, Larry J. Gut and George W. Sundin. Plum curculio information written by Mark Whalon, Andrea Biasi-Coombs, Eric Hoffmann, MSU Entomology. Purchase this in a pocket-sized guide for reference in the orchard from **MSU Extension** (publication E-2720).