Slug: Ask the Master Gardener
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Have you bitten into a nice big apple from your prize tree only to discover that something has been there before you? If you find a small whitish-pink worm and a big black mess in the core, it is almost certain that you have found the larvae of the codling moth. Codling moth is the single most common insect pest of tree fruits in the western United States. The larvae infest fruit of apple, pear and crabapple trees. It has been known to damage other fruit, including apricots and peaches. There is little that can be done now to rid your trees of this pest except to destroy the affected fruit either by freezing or heating it to kill the larvae. Do not throw infected fruit into the compost or recycle collection bin until you are sure the larvae have been killed.

When codling moth larvae leave the fruit they spin waterproof cocoons under loose bark or in litter under the trees. They spend the winter in the cocoons. As the weather begins to warm in the spring the larvae change, or pupate, into small brownish-gray moths with darker markings and bronze bands on the tips of the front wings. The moth emerges around blossom time or a little later if the weather is cool. During periods when early evening temperatures are above 60 degrees and it is not windy the moths lay small white eggs on the leaves. As the larvae hatch they feed on leaves first then begin to migrate toward the developing fruit.

They usually enter the fruit at the calyx or flower end and begin their tunnel toward the core of the fruit where they feed on the immature seeds. The telltale mounds of frass or excrement at the point of entry give away their presence. After the larvae have reached maturity in 3 or 4 weeks, they exit the fruit and crawl or drop down the tree trunk to spin a cocoon in which to pupate, and the second generation develops. By this time the fruit has grown larger and the second batch of moths lay their eggs directly on the fruit.

There are many natural enemies of the codling moth. Birds, especially the downy and hairy woodpeckers, feed on the larvae in the cocoons. But the codling moth is controlled even more effectively by several different kinds of parasitic wasps that lay their eggs in the moth eggs. The trichogamma wasp can be purchased in large numbers and released when the moth is laying her eggs. Other predators of codling moth larvae are ground beetles and earwigs.

Keeping loose bark brushed off the trunk and removing debris from under the trees eliminates shelter in which the insect can over winter. Thinning apples so they do not touch one another reduces the ability of the larvae to make a quick entry, as they need leverage to help them cut into the fruit. Another control method is to wrap the tree trunk with corrugated cardboard or burlap. The larvae will crawl into and under these wraps to spin their cocoon and can be collected and destroyed regularly. Old abandoned orchards can be sources of continuing infestations. Finally, do not allow fallen fruit to lie on the ground to re-infect your tree.

Chemical controls are available, but timing is all-important. Insecticides should be applied during the periods of peak egg laying in late spring after petal fall and another in midsummer to catch the second generation. Unfortunately when you spray for the bad insects you are more than likely going to kill the beneficial insects too. Be cautious about

spraying at times when bees are active. WSU bulletin EB 0846 Spray Schedule for Apples and Pears, is available at the Cooperative Extension office.

This column is written by Washington State University/Skagit County certified Master Gardeners. Questions may be submitted to WSU/Skagit County Cooperative Extension, 306 S. First, Mount Vernon, WA 98273-3805.