

Spotted Wing *Drosophila*



photo McEvey 2017

Drosophila suzukii male (left), female (right). Photo by Shane F. McEvey, Wikipedia.

Drosophila suzukii, also known as the spotted wing drosophila was accidentally introduced into North America from Southeast Asia. It was first found in central California in 2008, and has now spread throughout the West Coast and several other states across the U.S. This fly is a major pest of fruit in California, particularly summer fruit including berries (blackberries, raspberries and blueberries), stone fruits (cherries, peaches, apricots, nectarines) and grapes. This fly can also make figs inedible.

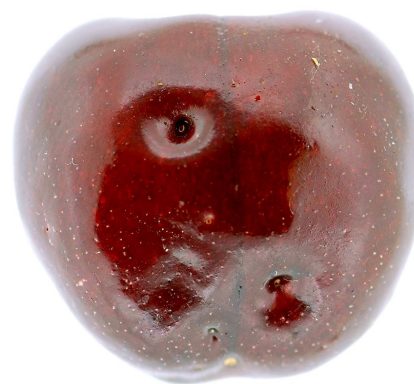
These flies are the same size and approximate coloration as the typical *Drosophila melanogaster*, which is commonly attracted to ripe fruit indoors and outside. They have the typical red eyes and yellowish brown body coloration. Male *suzukii* can be immediately recognized by the dark spot at the tip of the wings. Females are less obvious but are characterized by having a distinctive, saw-like ovipositor.

Females use this saw-like ovipositor to slice through fruit skin to allow them to insert an egg. In addition to inserting an egg they also introduce yeasts into the incision. The yeasts begin to decay the fruit in the vicinity of the incision providing food for the fly's maggots.

These flies do not directly feed on the fruit, rather they feed on yeasts and the breakdown products they produce from the spoiling fruit. Needless to say, this results in rotten fruit that cannot be sent to market or eaten. In the case of figs, the fruit appears intact and edible but the interior will be spoiled with a strong odor of acetic acid.

Drosophila suzukii overwinter as adults. They emerge from hibernation once temperatures reach 50° F. The length of time it takes from egg to adult depends on temperature but can be as short as two weeks at higher temperatures or as long as 10 months. However, males become sterile at temperatures over 90° F, which limits their populations in regions with high summer temperatures.

Management and monitoring of this fly depends on the situation. Apple cider vinegar is used as an attractant in traps used both for monitoring and detecting the presence of these flies, as well as removing them from fruit trees and berries. Farmers and homeowners can use insecticides, but these must be applied before egg laying and then weekly during fruit development. They also need to be appropriate for application on a food crop.



Oviposition scars on a cherry, caused by *Drosophila suzukii*. Photo courtesy of Martin Hauser.