

First Detection of an Invasive Cherry Fruit Fly in Montana

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9-30-2011. The **spottedwinged drosophilid (SWD)**, *Drosophila suzukii*, has been detected in Montana for the first time. This invasive fly was initially reported in California in 2008 and has



SWD larvae in strawberry. Image: Hannah Burrack

Lab in Bozeman, and the USDA-ARS Systematic Entomology Laboratory in Washington DC. A second SWD, also a male, was identified from a trap collected in mid-August from the Finley Point fishing access. Over the ensuing weeks, two additional males and two females have been caught at various locations in the same area.

At this time there is no indication that SWD has become established in Montana, and it remains to be seen whether Montana's climate will be conducive to future establishment. SWD thrives in high humidity, suggesting that the more arid regions of Montana may be less vulnerable to establishment. Monitoring for adults and larvae

since quickly spread to Oregon, Washington, and Western Canada. Six adult flies have been found in special SWD traps deployed in the Flathead Valley this year to monitor for this pest. Tom Lawrence, a field researcher for the Flathead Lake Cherry Pest Control Board, first identified a single male collected in a lure trap along Blue Bay on September 1 2011; this identification was subsequently confirmed by the Flathead County Extension Office in Kalispell, the MSU Schutter Diagnostics



Adult male *D. suzukii*, Blue Bay, Flathead Lake
Image: Pat McGlynn

will continue next year to determine the extent of establishment. No control recommendations will be made unless SWD damage is demonstrated in Montana.

SWD is an invasive species from southeastern Asia; it can be a serious pest of cherries and numerous other fruit crops, including raspberries, strawberries, and plums. Since first appearing in California in 2008 they have spread to many locations in the western U.S., the southeastern U.S., and British Columbia. More recently, they have appeared in the northeastern U.S. as well; Maryland, Massachusetts, Connecticut, Pennsylvania, and New York have just identified their first SWD from lure traps in the past several weeks.

APPEARANCE: Adult SWD are small light brown flies (~ 1/16th to 1/8th inches long) with prominent red eyes, similar to related fruit flies commonly found in homes. Males have a diffuse black spot near the tip of each wing; female wings are entirely transparent. Larvae are the most damaging stage. They are white, slender, and worm-like with a total body length slightly longer than that of the adults. Adult SWD feed on nectar as well as yeasts and bacteria growing on rotting fruit.

DAMAGE: Unlike most *Drosophila* species, which attack only rotting fruits, SWD attacks sound marketable fruits during the ripening process. Females cut slits in the skins of cherries and other fruits, laying eggs just underneath the skin. In cherries, the egg-laying slit leaves a small round sunken spot on the fruit. There may be multiple egg-laying slits in each cherry. Newly-hatched maggots burrow into the fruits to feed.



Adult female (left) and male (right), *Drosophila suzukii*, Blue Bay, Flathead Lake
Image: Pat McGlynn

LIFE CYCLE: If SWD becomes established, there are likely to be two or three generations per growing season in Montana. Based on 2010 climatic data (Oregon State U., <http://uspest.org/cgi-bin/ddmodel.pl?spp=swd>), the Polson area could see overwintering females become active in mid-June, with eggs being laid in July and early August.

LOOK-ALIKE SPECIES: A native species, the western cherry fruit fly, *Rhagoletis indifferens*, also infests cherry fruits during the larval stage. Adults are easy to distinguish from those of SWD.

However, the larvae of western cherry fruit fly look remarkably similar to larval SWD, and are only separable by examination under magnification.

FOR SPECIFIC QUESTIONS ON BIOLOGY AND CONTROL, please contact Dr. Kevin Wanner, kwanner@montana.edu, (406) 994-5663. Samples for identification may be sent to Schutter Diagnostics Lab, Montana State University, following insect ID sample preparation instructions on our web page: <http://diagnostics.montana.edu>