

Mexican Fruit Fly Quarantine

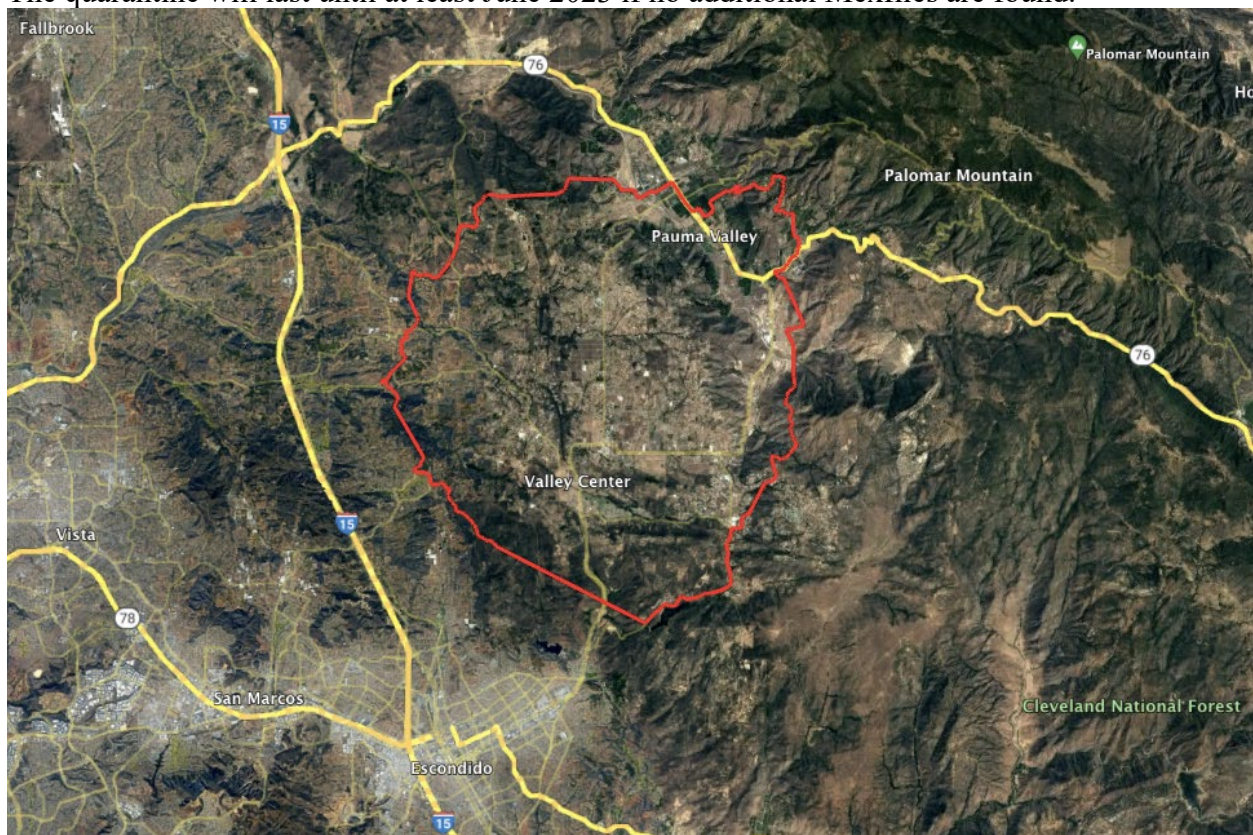
Eric Middleton, Area IPM Advisor

Main Points

- Mexican Fruit Fly (Mexfly) was found in Valley Center, triggering a quarantine that began on 8/19/2022.
- Mexfly is an invasive pest that can seriously damage fruits like citrus and avocado among others.
- Mexfly adults are light orange-yellow flies with 3 whitish stripes on their back and light yellow or brown stripes on their otherwise clear wings. They are ~1 cm (0.38 in) long, and females have an ovipositor that resembles a stinger
- Homeowners should not transport fruit or vegetables outside of the quarantine area and should double bag and dispose of any fallen or waste fruit.
- Growers, harvesters, and packers in the quarantine should contact the California Department of Agriculture (CDFA) to comply with the quarantine
- If you suspect a Mexfly infestation or sighting, contact CDFA: 1-800-491-1899

What's Happening?

Between August 2nd and 22nd 2022, several Mexican Fruit Flies (Mexfly) were found in commercial citrus groves in Valley Center. Finding this highly damaging invasive pest triggered a quarantine beginning on 8/19/2022 across 77 square miles in Valley Center and Pauma Valley. The quarantine will last until at least June 2023 if no additional Mexflies are found.



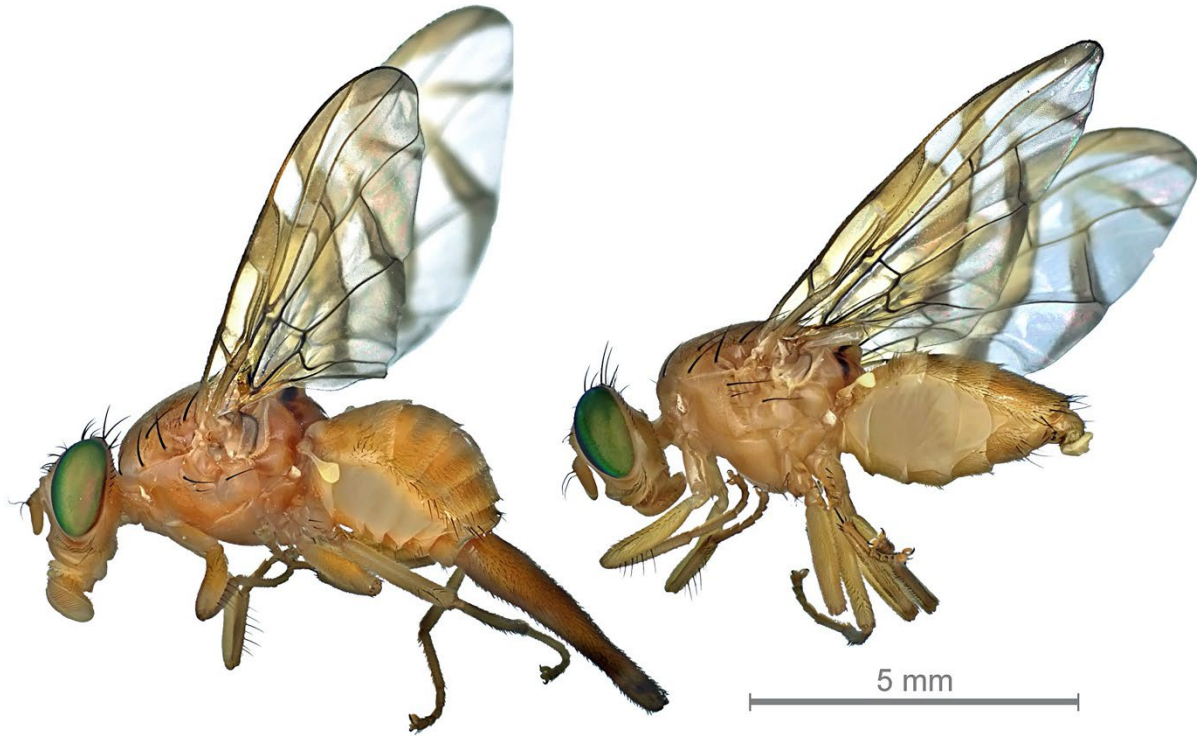
A Google Earth image of the quarantine area (in red)

Mexfly Identification

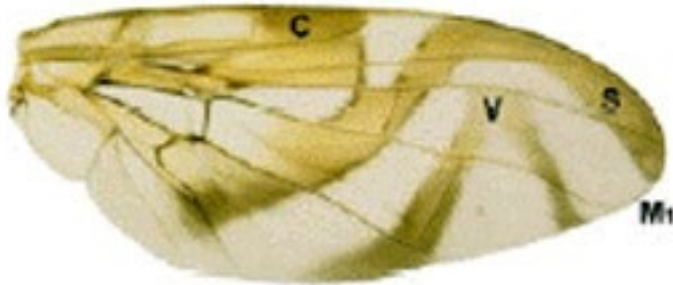
Mexfly (*Anastrepha ludens*) adults are larger than common house flies at ~1 cm (0.38 in) long. Their bodies are a yellow-orange color, with three whitish-yellow stripes on their backs. Mexflies also have colorful eyes, usually an iridescent green color. Mexflies have clear wings with distinctive yellowish or light brown patterns in a V and S shape. Female Mexflies have a highly recognizable ovipositor (egg-laying organ) around half their body length that resembles a large stinger.



Adult Female Mexfly seen from above



Adult female Mexfly on the left, adult male Mexfly on the right



Mexfly wing with the V and S shapes marked

Mexfly Damage and Life History

Mexfly is a species of fruit fly originally native to Central America. Mexfly females lay eggs underneath the skin of ripening fruits. The eggs hatch into larvae, which feed on the fruit causing damage and leading fruit to rot and spoil. Mexflies have multiple generations a year. In warm weather, they can complete a lifecycle and reproduce approximately every 30 days. In cooler weather, it will take longer, up to 100 days.

Common hosts include many kinds of citrus (Oranges, lemons, limes, grapefruit), avocado, pomegranate, persimmon, guava, apple, pear, and others. Many of these fruits are grown commercially and are commonly found in residential areas in the quarantine zone and in the rest of Southern California. Because they are so damaging to important food crops in the area,

Mexflies pose a significant threat to agriculture in Southern California. For a full list of host plants, visit https://www.aphis.usda.gov/plant_health/plant_pest_info/fruit_flies/downloads/host-lists/mexfly-host-list.pdf

What Does the Quarantine Involve?

Properties within 200 meters of where Mexfly was detected are being treated with an organic formulation of Spinosad. Spinosad originates from naturally occurring soil bacteria, is effective at reducing fruit fly populations, and poses very low risks to human and pet health. Fruit will also be removed from host plants within 100 meters of properties where female Mexflies or Mexfly larvae were detected.

Additionally, commercial growers in the quarantine will be treating fruit groves with insecticides on a regular schedule per CDFA guidelines to eliminate Mexfly populations. The insecticides that will be used include a bait that attracts Mexflies, making them more effective and reducing the amount of insecticide applied. Thousands of sterile male Mexflies will also be released every month to reduce the chances that female Mexflies can successfully mate and reproduce. Commercially grown fruit leaving the quarantine area must be inspected and comply with regulations to make sure it is free of Mexflies.

What Should I Do?

Invasive pests like Mexfly are most likely to persist in urban and suburban communities and are found in neighborhoods and backyards more much more frequently than they are found in commercial agricultural areas. It is therefore extremely important that the public is aware of pests like Mexfly and do their best to limit its spread. You are the first line of defense when it comes to detecting and preventing Mexfly.

For homeowners living in the quarantine zone, do not move fresh fruit or vegetables outside of the zone. The only exceptions are if the fruit is canned, baked, frozen, or preserved, all of which will have killed any fruit fly larvae that were present. Dispose of waste fruits and vegetables by double bagging them and throwing them away or by grinding them in a garbage disposal. Composted fruit or fruit left to decompose can still harbor fruit fly larvae. Additionally, do not transport host plants outside of the quarantine, even if they do not have fruit on them. Monitor susceptible plants for Mexfly adults or larvae and report any sightings to CDFA at the Pest Hotline: 1-800-491-1899. If you have additional questions about the quarantine, contact CDFA.

If you commercially grow, harvest, pack, or transport fruit in the quarantine area, contact CDFA to learn more information and to comply with the quarantine.

Even if you live outside of the quarantine area, be on the lookout for Mexfly. Know how to identify this pest and understand the damage it can cause if found in your region. Do not transport fruit from areas where Mexfly is native (Mexico and Central America) to other areas where it can become invasive. Understand that although necessary, the quarantine can be difficult and expensive for growers and people involved in agricultural production. If you have questions or concerns, reach out to CDFA or to UC Cooperative Extension personnel. Working together, we can mitigate the spread of this damaging pest and help prevent future outbreaks from occurring.

Resources

To read the original press release on the Mexfly quarantine, visit

https://www.cdfa.ca.gov/egov/press_releases/Press_Release.asp?PRnum=22-109

For up-to-date information on the current quarantine, visit

<https://www.cdfa.ca.gov/plant/mexfly/regulation.html>

Report Mexfly sightings at the CDFA Pest Hotline: 1-800-491-1899