

Fruit Fly (Gnat)



Appearance:

Small fruit fly adults are about 1/8 inch long, including the wings. They are colored dull tan to brownish-yellow or brownish-black. The eyes are usually bright red. One of the most common vinegar flies, *Drosophila melanogaster* is tan with the abdomen blackish above and grayish below, and has bright red eyes. A slightly larger and darker (brown to black) species, *Drosophila repleta*, is found commonly in restaurants and bars that have sanitation issues.

Mature small fruit fly larvae are about 1/4 to 3/8 inch long, eyeless, legless, and tapering towards the pointed head from the large rounded rear segment. The head contains 2 dark mouth hooks. Larvae are nearly white except for the dark mouth hooks and yellow tips of the terminal abdominal spiracles (breathing pores).

Habitat:

Small fruit fly females lay their eggs (average about 500) near the surface of fermenting fruits and vegetables or near rips and seams in the imperfectly sealed containers of such materials. The eggs hatch in about 30 hours.

The larvae develop in the vinegar-like liquids of the fermenting materials where they feed near the surface and primarily on the yeast, for about 5 to 6 days. Prior to pupation, the larvae crawl to drier areas of the food or elsewhere. The brown, seed-like sheath containing the pupa is formed from the last larval skin/exoskeleton. The newly emerged adults mate in about 2 days. The life cycle (adult to adult) may be completed in 8 to 10 days at 85°F. Their reproductive potential is enormous.

The larvae develop primarily in liquids and near the surface of food items but seek drier sites nearby in which to pupate. Since these flies have a short life cycle of 8 to 10 days, they can exploit many temporarily available developmental sites such as sour mop and broom heads, fruit under a table or cabinet, fruit left out in a bowl, etc. Dishwater and mop water full of food particles can accumulate on surfaces or in crevices and ferment, providing ideal fly breeding conditions. Adults tend to hover in small circles. Because of their small size, many species are able to penetrate ordinary window screens.

Diet:

Small fruit flies are attracted primarily to fresh fruits and vegetables and those fermenting because of yeast. Materials lose their attractiveness when they begin to decay because of bacteria and fungi. Materials commonly infested include bananas, grapes, peaches, pineapples, tomatoes, cucumbers and potatoes. Fermented liquids include beer, cider, vinegar, wine and rancid mop water containing residues on floors and in tile grout ruts. Some species are attracted to human and animal excrement.

Solutions:

What you can do: The key to small fruit fly control is sanitation. Elimination of larval food and developmental sites is mandatory. The presence of adult flies usually means that larvae are developing in some nearby fermenting material. In food handling establishments and other commercial settings, mop water puddles beneath equipment should be squeegeed into floor drains and missing grout between floor tiles should be replaced. If the flies are coming from outdoors, replacing standard window screens with finer gauge screens having a smaller mesh size can be helpful in keeping these small flies out.

The number of vinegar flies indoors can be reduced through the use of insect light traps and baited jar or canister traps. Adults can be easily killed with an appropriately labeled non-residual aerosol insecticide application. However, such relief will only be temporary, lasting only until new adults emerge, unless proper sanitation has been practiced.

If these flies are entering structures, the best method of control is exclusion. This includes screening all doors and windows. Self-closing doors are helpful. In commercial structures, dock doors should be equipped with an interior screen door, which is lowered when the dock door is up, but the dock not in use, to permit ventilation.

Non-public exterior doors should be equipped with air curtains, which come on automatically whenever the door is opened to help prevent entry.

Professional Solution: Quik-Kill pest management professionals can reduce or stop small fruit fly breeding via the use of good bacteria to help clean floor drains and service drains in order to reduce the breeding sites of fruit flies and drain flies, reduce foul drain odors, reduce the chances of backups, and improve slow moving drains.

Service drains in general can be an excellent site for fruit flies and drain flies to lay their eggs, and for the larvae (maggots) to feed. Fortunately Quik-Kill's bacteria eats this organic build up and converts it into water and carbon dioxide.

Quik-Kill's Drain Service will reduce your small fly breeding sites, improve odors, improve flow, and reduce the chance of backups. If you are concerned about your main line, ask about our Full Service Drain Service, where our automated dispenser or time release products dispense bacteria over the course of a month or more into your drains, ensuring a steady supply of good bacteria.

Strategically-placed scent lure jar traps and insect light traps can be installed by a Quik-Kill service technician to reduce numbers of adult small fruit flies indoors. A non-residual aerosol insecticide can also be used to kill large numbers of adult flies, but only the elimination of the breeding sites will provide long-term control.



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