

## Nuisance Flies

### What are nuisance flies?

Nuisance flies are insects that are annoying or can spread diseases to people and domestic animals by biting or carrying pathogens. All nuisance flies are members of the Insect Order “Diptera” (meaning “two-wings”). The adults can be identified by having only one pair of wings; however these fly species may be quite diverse in appearance. Nuisance flies are found throughout California and cause a variety of problems. The immature (larval) stages of these flies are found in a range of habitats, including water and semi-aquatic sites. Fly larvae found in decaying organic matter are sometimes called maggots.

### What is the public health importance of nuisance flies?

The close association of many of these insects with dead animals, feces, or garbage and their attraction to humans, animals, and our food allows flies to potentially pick up and spread a variety of bacteria and parasites that may cause disease. Others are capable of delivering painful bites and can spread diseases to humans and animals. Some nuisance flies reproduce rapidly and become annoying simply because of their sheer numbers, but are not medically important.

### How are nuisance flies controlled?

The term nuisance flies covers many species so there is no one method of control. Suggested steps include the following:

- Identify the problem fly, if possible, by using online resources, pictorial guides or by contacting local environmental health departments, vector control agencies or university extension services.
- Eliminate items that attract flies such as rotting organic material (meat, leaves or grass clippings, household garbage) or animal feces.
- Ensure that windows and doors close properly and that screens are in good repair.
- Use insect repellents containing the active ingredient DEET, picaridin, or oil of lemon eucalyptus, or, IR3535. Wear long sleeve shirts and long pants to provide an effective barrier to flies that bite.
- Turn off or limit the use of lights at night to discourage those flies that are attracted to light.
- Cover food, whether for humans or animals.
- Various traps, baits and insecticidal sprays are available for fly control. Read the product labels or consult a pest control professional to determine which products are available to control the specific nuisance fly problem.

**What are some of the most common nuisance flies and where are they found?**

Generally, nuisance flies are more common in spring, summer, and fall, but many are active during the winter months. Due to California's range of latitudes, habitats and elevations, the occurrence of nuisance flies varies by region. Common nuisance flies include the following:



**Midges (Chironomidae)** look like mosquitoes but lack piercing mouthparts and do not bite. They are attracted to lights and can be present in such large numbers as to be annoying. They have aquatic larvae and are more common around bodies of water. Midges do not transmit human disease but in rare cases, may cause asthmatic reactions in some people with chronic exposure to large numbers of these flies.



**Black flies (Simuliidae)**, also known as buffalo gnats because of the humpbacked appearance of the adults, are commonly found along waterways and in shaded forests. They are biting flies and their voracious appetites make them very familiar to outdoor enthusiasts. In California, black flies do not transmit human disease.



**No-see-ums (Ceratopogonidae)** are tiny flies, the smallest being one millimeter in length. They are vicious biters, the pain of which is remarkable coming from such a small insect. In California, no-see-ums do not transmit human disease but cause painful bites that can itch for days.



**Horse and deer flies (Tabanidae)** are commonly found in, but are not restricted to, forests near lakes, rivers, and streams. They are large flies capable of delivering painful bites.



**House flies (Muscidae: *Musca domestica*)** are perhaps the most common of all flies encountered indoors, but they are also abundant outdoors. House flies will breed in feces, garbage, or other rotting organic material. Removing these breeding sources will limit house fly numbers. They are particularly fond of fruits and other sugary foods. House flies are capable of spreading bacterial and viral diseases.



**Canyon flies (Muscidae)** are actually a complex of nine closely related species. They are much more common in southern California than in the north. Adult canyon flies feed on sweat, mucous, tears, and other bodily discharges. These flies do not bite, but instead will crawl about the body to feed. These flies are thought to transmit the rare mammalian eye worm *Thelazia californiensis* to humans and other animals.



**Blow flies (Calliphoridae)** are large, metallic-looking flies. They are strong fliers and breed in garbage, dead animals, and human food. These insects readily invade homes and are capable of transmitting bacterial and viral diseases. To reduce the numbers of these flies, the prompt removal of attractants like dead animals and feces is recommended.



**Flesh flies (Sarcophagidae)** are unusual among flies because the females deposit live larvae instead of eggs. Like blow flies, flesh flies are attracted to garbage, feces, rotting flesh and human food. The immediate removal of food sources will reduce flesh fly numbers.

### Where can I find additional information?

The University of California, Statewide Integrated Pest Management Program has information available at: <http://www.ipm.ucdavis.edu/PMG/PESTNOTES/pn7457.html>.

The U.S. Centers for Disease Control and Prevention has information available at their Website: <http://www.cdc.gov/ncidod/dvbid/westnile/RepellentUpdates.htm>.

BugGuide.net: <http://bugguide.net/node/view/15740>

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