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Flies in the home

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Quick Facts

Several species of flies enter homes in Colorado. Most are mere nuisance problems.

Cluster flies, blowflies, or face flies are found during fall and winter. These larger flies use homes for shelter from the cold but will not reproduce at this time.

Blowflies or houseflies are found in the home during summer. These flies develop in garbage, manure or on other animal materials.

The best way to control fly problems in a home is to exclude them by screening. Insecticides can supplement other controls for some flies. These should be applied to areas, away from food, where flies rest.

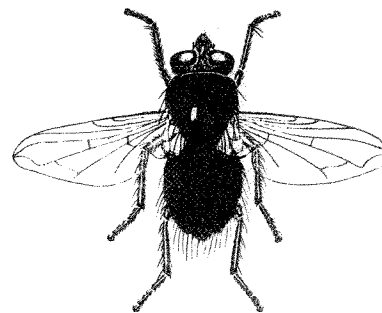
Several species of flies commonly enter Colorado homes. Most are merely nuisance pests. Others are important because they can transmit diseases. House flies, face flies and blow flies develop in manure and garbage and are commonly contaminated with disease-causing bacteria, including those associated with food poisoning.

The most commonly observed stage of a fly is the winged, adult stage. The immature stage is a pale, legless maggot. When full grown, maggots wander from the breeding site in search of a place to pupate. Many flies complete development (egg-larva-pupa-adult) in a short period, seven to 14 days, and produce numerous generations during a typical season.

Although flies most often are a nuisance during the warm season, indoor overwintering is common with cluster flies and face flies.

Common Colorado Flies

Blow flies are fairly large, metallic green, gray, blue or black flies found throughout the state. These flies tend to be more common than the house fly and sometimes are called the "house fly of the West". The adult flies spend the winter in homes or other protected sites but will not reproduce during this time.



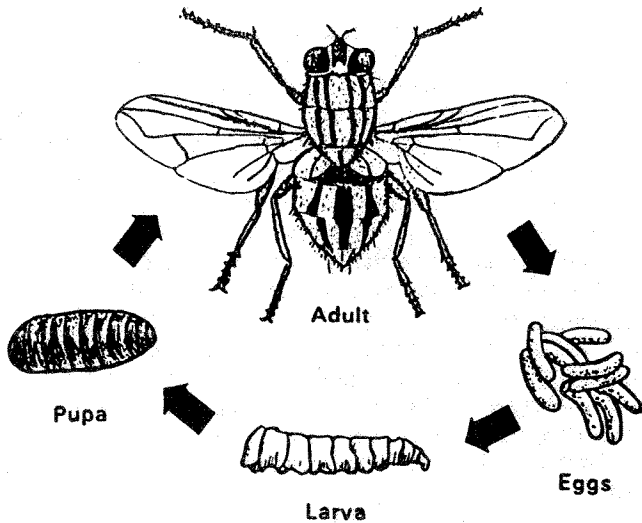
Blue blow fly, *Calliphoridae* species. Source: University of California.

Blow fly maggots feed on garbage. They occasionally can be found in homes that are near a carcass of a dead squirrel, rodent or bird they have wandered from. Blow flies breed most commonly on decayed carcasses and droppings of dogs or other pets. The adult blow fly is also attracted to gas leaks.

House flies are the best known of the house-infesting flies but are found infrequently in Colorado. House flies generally are gray, with the thorax marked with broad dark stripes. Most often there is some yellow coloring along the sides that differentiates them from face flies.

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Housefly life cycle. Source: Texas A & M.

House flies are usually found where humans are present. Larvae commonly develop in or near man-made sources of food and can be found in garbage, animal waste, culled fruits and vegetables, and spilled animal feed. The adult flies feed on a wide range of liquid waste but can eat solid foods, such as sugar. To digest solid foods, house flies liquify food by regurgitating. Because of this habit, house flies can pose serious health threats by mechanically transmitting disease organisms.

During mild winters, house flies may fly and breed continuously, as temperatures permit.

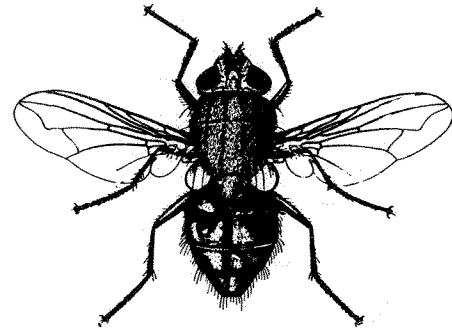
Face flies are closely related and similar in appearance to house flies but have different habits. Face flies are relatively new to the region and have been in Colorado only in the last 25 years. They are more common than house flies, particularly in rural areas.

Face flies pass the winter as adults and often seek shelter in upper stories of buildings such as attics, steeples and little-used upper rooms. They become active in spring and females lay eggs in fresh cattle manure that is less than one day old.

Adult face flies feed on many types of fluids. They often are attracted to the eyes, nose and mouth of cattle and have been implicated in the transmission of pinkeye disease to cattle.

Little house flies are smaller than the house and face flies but similar in appearance. Indoors they fly for long periods and rarely rest. The adult flies lay eggs in decaying organic matter, particularly manure, where the maggot-stage larvae feed.

Cluster flies are one of the most annoying flies found in homes during the cool seasons. They are serious pests in office buildings and concentrate in the upper stories. Cluster flies are larger than house flies and during their indoor period they are semi-dormant and fly awkwardly.

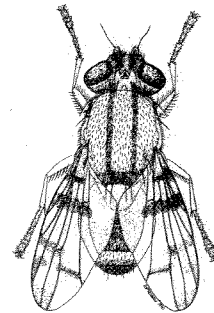


Cluster fly. Source: USDA.

The habits of cluster flies are very different from other common domestic flies. Immature stages develop as a parasite of earthworms. Eggs are laid in the soil and the maggots enter and feed within the earthworms. Cluster flies do not feed on garbage or animal manure.

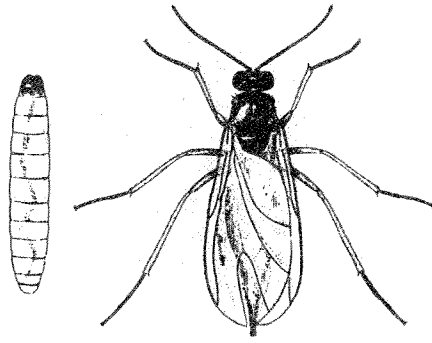
In late summer, cluster flies seek overwintering shelter. They fly to buildings in the afternoons and rest on sun-exposed areas. As the sun sets, the flies seek out cracks and other openings into the building and move to upper stories. Once inside they form large aggregations.

Picture-winged flies develop by feeding on seeds, fruits, and other plant parts during the growing season. In late summer they seek overwintering shelter and are a common invader of homes. They are harmless and will not reproduce indoors.



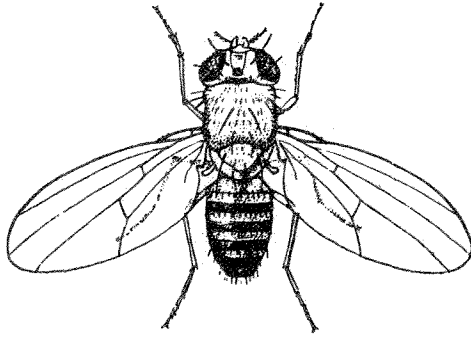
Picture-winged fly. (Drawing by Mike Kippenhan).

Fungus gnats are small, dark-colored flies most often found collecting around windows during fall and winter. Fungus gnats can be found indoors infesting potting mixes used for houseplants or hopping across the soil surface of a plant. High organic matter plant mixtures and organic fertilizers, such as fish emulsion, encourage fungus gnat development. Overwatering, a common problem during fall and winter, will increase fungi and fungus gnat development. Fungus gnats can reproduce on indoor plants and cause little if any damage. They also occur outdoors where they breed in mushrooms and other decaying plant materials.



Fungus gnat (adult and larva). Source: USDA.

Pomace or vinegar flies are among the smallest flies found in homes. They usually are a light brown color and may be marked with bright red eyes. These small 'fruit flies' most often are found hovering around overly ripe fruit. Fermenting materials, such as leftover beer or soft drinks, also are a favorite food of these flies. Populations tend to be greatest in late summer and early fall as they infest fruits during the harvest season.



Pomace fly. Source: USDA.

Drain flies, also known as moth flies, are occasional problems in homes. These small moth-like flies sometimes emerge from drains of sinks, particularly in spring. Drain flies develop by feeding on bacteria and organic materials that can colonize the linings of drains. Large numbers of the flies can be produced where there is a problem with broken or leaking pipes.

Fly Control

Sanitation practices that remove breeding areas are fundamental to the control of filth-breeding flies, such as house flies and blow flies. Remove or cover garbage regularly and clean spilled animal feed and manure. Face flies, which typically develop in pasture lands, and cluster flies (earthworm parasites) often are difficult to control by breeding area management.

To control fungus gnats, correct the conditions of the breeding area. Allow the soil to dry thoroughly between watering and eliminate decomposing plant materials. This reduces the amount of fungi where fungus gnats breed.

Fruit flies are best controlled by removing breeding sources. Discard overripe fruit, and wash bottles and cans during recycling to eliminate common breeding sites.

Drain flies, which develop on the gelatin-like coating that forms in drains and pipes, often are eliminated by correcting cracks or leaks in pipes that allow seepage or serve as breeding sources.

Screening and other exclusion techniques can be a very important management tool for several types of indoor fly problems. Caulk or cover all openings into a home to prevent flies from entering. Efforts to exclude flies must be done prior to when they enter buildings. For example, cluster flies rarely are found indoors until late winter and spring but typically enter buildings during late August and September.

Insecticides used for fly control should only be considered as a supplement to other controls. Serious problems exist with insecticide-resistant flies and many fly populations are now difficult to control with insecticides.

Spot treatments with insecticides applied to areas of high fly activity are most efficient. For example, flies that tend to rest in dark corners can be controlled by applications to these areas. Cluster flies are controlled by treatments applied to upper stories of building exteriors immediately prior to periods when flies move indoors for overwintering. Chlorpyrifos (Dursban) is currently the most common insecticide used for fly control and is widely available.

Where fungus gnats are a problem, insecticides can supplement the cultural control of reduced watering. Houseplant aerosols that contain pyrethrins or resmethrin, applied at two to three-day intervals for three to four weeks should eliminate most of the adult fungus gnats.

"Fly strips" that contain the insecticide Vapona (dichlorvos or DDVP) also are used for fly control. These products slowly release the insecticide as a vapor and provide long-term control. However, **Vapona insecticide is highly toxic**. Label directions prohibit use of these products in areas where food is handled or stored, in rooms where children or sick people rest, or other areas where prolonged contact is likely. The registration of these pest-strips has been under review due to health concerns and future availability may change.

Several types of **traps** for flies also are available and can supplement other controls. Fly paper and electrocution light traps can kill flies but are only effective in areas where exclusion and sanitation efforts have already reduced the fly populations to low numbers.

Various food-based traps also are for sale. These traps often contain a protein bait, sometimes with the addition of a pheromone (sex attractant) used by flies. As with other traps, they can supplement other controls such as sanitation and exclusion.

Table 1: Summary of techniques useful for control of flies in and around homes.

Fly species	Scientific Name	Controls
Blow flies	Calliphoridae	Tightly seal garbage containers and remove animal (particularly dog) manure from areas around the home; screen windows in summer. Use fly paper or fly traps. Vapona "pest-strips" can be used in some areas (not food handling/storage or sleeping areas).
House fly	<i>Musca domestica</i>	Tightly seal garbage containers. Screen windows in summer. Use fly paper or traps to attract and capture flies. Vapona "pest-strips" can be used in some areas (not food handling/storage or sleeping areas). Spot treatment of room corners with insecticides to kill resting flies.
Face fly	<i>Musca autumnalis</i>	Seal homes in late summer prior to periods when flies enter to overwinter. Try to limit sources of cattle manure in pastures, particularly in late summer. Treatment with insecticides of exterior walls around openings can further limit movement into homes during late summer. Vapona "fly-strips" in attic areas can kill some of the overwintering flies.
Little house fly	<i>Fannia species</i>	Limit breeding sources from around the home, such as decaying vegetable materials and, particularly, manures. Keep window and door screens intact.
Cluster flies	<i>Pollenia rudis</i> <i>Pollenia pseudorudis</i>	Seal the home (particularly upper stories of south and west sides) prior to periods when flies enter in late August and September. Exterior treatment of house walls with effective insecticides can further limit entrance. Vapona "fly-strips" in attic areas can kill some of the overwintering flies.
Picture-winged flies	Otitidae	Picture-winged flies are harmless, minor nuisance pests that overwinter in homes. Control is generally not needed. They move into homes during late summer and fall; preventive practices which restrict other flies from entering homes will help control this fly.
Fungus gnats	<i>Bradysia species</i>	Reduce watering of house plants to allow increased drying and limit development of fungi in the soil on which larval stages feed. Discard rotting bulbs or parts of houseplants that are decaying. Apply houseplant insecticides to the plants and soil surface at frequent (2-4 day) intervals for 2-3 weeks to kill a generation of adult insects.
Pomace or vinegar flies	<i>Drosophila species</i>	Remove sources of breeding which include overripe fruit, fermenting materials (e.g., stale beer or soft drinks).
Drain flies	<i>Psychoda species</i>	Correct problems with plumbing that produce conditions favorable to fly breeding.

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