I N S E C T S E R I E S

HOME & GARDEN

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, and some other blow flies or face flies are found during fall and winter. They use homes for shelter from the cold but do not reproduce at this time.

Blow flies or house flies are found in the home during summer. These flies develop in garbage, manure or 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. Apply them to fly resting areas, away from food.

Colorado State University Cooperative Extension

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.

Figure 1: House fly life stages. *(Photo courtesy Clemson University.)*

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, and adult) in a short period, seven to 14 days, and produce many generations during a typical season.

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

Common Colorado Flies

Blow Fly

Blow flies are fairly large, metallic green, gray, blue or black flies found throughout the state. Common species include the greenbottle flies (*Lucilia* spp.), black blow fly (*Phormia regina*), and various *Calliphora* species. These flies tend to be the most common flies found in and around homes during the warmer months. Adults also may winter behind walls and occasionally are observed within homes during cooler months, but are not reproducing at this time.

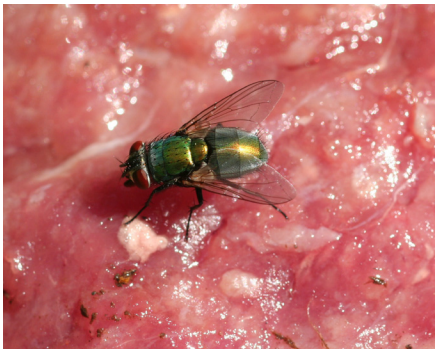

Figure 2: Blow fly (Greenbottle fly).

The blow flies are scavengers, particularly of animal-based materials. The breed commonly in livestock manure or pet waste and fresh carrion.

The presence of large numbers of blow flies within a home may be due to several reasons. Large numbers of them sometimes occur when a dead animal - usually a mouse or squirrel - dies within the home. The presence of

Figure 3: Black blow fly.

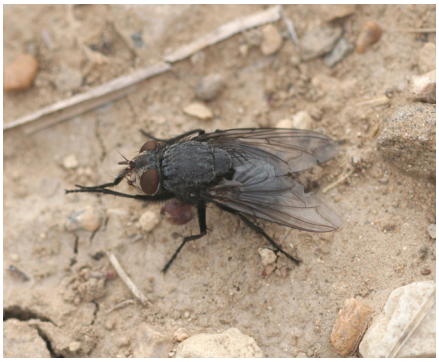

Figure 4: Blow fly (Calliphora).

Figure 5: House fly.

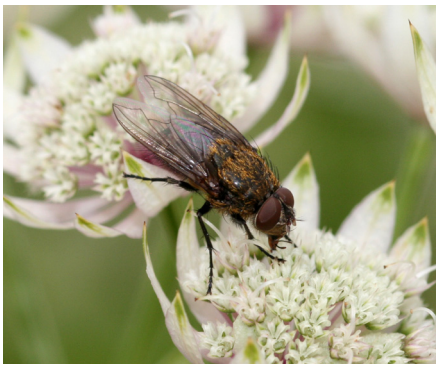

Figure 6: Cluster fly.

the flies are often preceded by observations of migrating maggots. Although such occurrences are unpleasant, they are usually short-live and self-limiting, as the insects are only capable of breeding on freshly killed animals. Blow flies sometimes are attracted to gas leaks. Also, the presence of blow flies may just result from their seeking shelter, as the cool shade of homes provides favored resting sites for flies that may otherwise be developing outdoors.

House Fly

House flies are the best known of the house-infesting flies but generally not abundant 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.

House flies usually are 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 liquefy food by regurgitating it. 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.

Little House Fly

Little house flies are smaller than 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 very moist manure, where the maggot-stage larvae feed.

Cluster Fly

Cluster flies are, by far, the most common fly found in homes during the cool months. They can sometimes be serious nuisance problems, particularly in taller buildings where they tend to concentrate on upper stories on the south and west sides. Cluster flies are moderate sized, generally dark gray and are distinguishable by the presence of golden hairs on areas of the thorax.

Cluster flies are actually a type of blow fly, but have very different habits. They develop as parasites of earthworms and are not associated with garbage, animal wastes, or other materials that provide breeding of the various ‘filth flies’. In spring and summer the adult flies lay eggs in soil and the maggots move to and develop within earthworms.

Flies that are present in late summer seek winter shelter and they survive winters as a semi-dormant adult fly. They may be seen sunning themselves on sun-exposed sides of buildings during warm periods and later infiltrate cracks in the building. In the process of seeking sheltering sites within the building they tend to migrate upwards, and thus are found most abundantly in upper floors of buildings. During the cool season some flies may inadvertently become active and fly lazily within the living spaces. However, cluster flies do not feed nor reproduce within buildings.

Picture-Wing Fly

Maggots of picture-wing flies develop by feeding on decaying plant material during the growing season. In late summer, they seek overwintering shelter and are a common invader of homes. They are harmless and do not reproduce indoors.

Fungus Gnat

Fungus gnats are small, dark 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. High organic matter plant mixtures and organic fertilizers, such as fish emulsion,

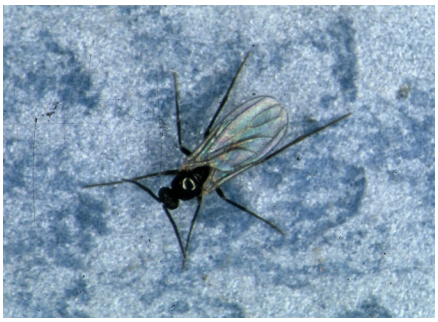

Figure 7: Fungas gnat.

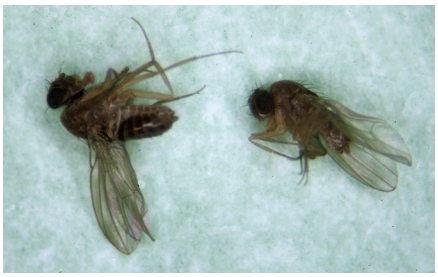

Figure 8: Vinegar flies (Drosophila).

Figure 9: Humpbacked flies.

Control Techniques

- *Sanitation*
- *Breeding site management*
- *Exclusion*
- *Insecticides and traps supplement other techniques*

encourage fungus gnat development. Overwatering, a common problem during fall and winter, increases 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.

Pomace or Vinegar Fly

Pomace or vinegar flies (Figure 6) are among the smallest flies found in homes. They usually are light brown 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. Populations tend to be greatest in late summer and early fall as they infest fruits during the harvest season.

Drain Fly

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 fly maggots 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 drain 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 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.

Vinegar flies are best controlled by removing breeding sites. Discard overripe fruit and wash bottles and cans during recycling.

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 areas.

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

Use insecticides only 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 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. For cluster flies, treat upper stories of building exteriors immediately before the flies move indoors for overwintering. Permethrin 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.

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 effective only 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 and/or sugar-based 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. These traps are effective for species that breed

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

Fly Species	Scientific Name	Controls
Blow fly	*Lucilia* spp. *Phormia* spp. *Calliphora* spp.	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	*Musca domestica*	Tightly seal garbage containers. Screen windows in summer. Use fly paper or traps to attract and capture flies. Spot treat room corners with insecticides to kill resting flies.
Little house fly	*Fannia* species	Limit breeding sources around the home, such as decaying vegetable materials and, particularly, very moist manures. Keep window and door screens intact.
Cluster fly	*Pollenia pediculata*	Seal the home (particularly upper stories of south and west sides) before flies enter in late August and September. Treat exterior house walls with insecticides to further limit entrance. Vapona pest strips in attic areas can kill some of the overwintering flies.
Picture-wing fly	*Ceratoxys latiuscula*	Picture-wing 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 that restrict other flies from entering homes will help control this fly.
Fungus gnats	*Bradysia* species	Reduce watering of house plants to allow increased drying and limit development of soil fungi 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 to 4 day) intervals for 2 to 3 weeks to kill a generation of adult insects.
Pomace or vinegar fly	*Drosophila* species	Remove sources of breeding, which include overripe fruit and fermenting materials (e.g., stale beer or soft drinks).
Drain fly	*Psychoda* species	Correct problems with plumbing that produce conditions favorable to fly breeding.

[1]*Colorado State University Cooperative Extension entomologists and professors, bioagricultural sciences and pest management.*