



VARMET GUARD®

ENVIRONMENTAL
SERVICES INC.



Residential Services ✧ Commercial Services ✧ Bird Solutions

Common Name: **House Fly**
Scientific Name: **Musca domestica**

HOUSE FLY



Introduction. These flies receive the common name of housefly from being the most common fly found around homes. It is not only a nuisance pest but of greater concern is its potential as a carrier of disease organisms, having been found to harbor over 100 different pathogenic organisms. It is worldwide in distribution and is found throughout the United States.

Recognition. Houseflies are 3/16 to 1/4 inch long, mostly dull gray, with females being slightly larger than males. The face has 2 velvety stripes, each silver above and gold below. The thorax has 4 narrow black longitudinal stripes on top. Houseflies have sponging-sucking mouthparts for consuming liquids.

Mature larvae (maggots) are 1/4 to 3/8 inch long, eyeless, legless, greasy-white and spike-shaped, tapering towards the head from the large rounded rear segment. The pointed head contains a pair of dark mouth hooks. The larvae breathe through a pair of pores (spiracles) in the widened rear segment.

Similar Flies. (1) The Cluster fly (*Pollenia rudis*) has golden hairs on the thorax, which lacks the 4 dark longitudinal stripes. (2) Flesh flies (family Sarcophagidae) have only 3 dark longitudinal stripes on the thorax; the tip of the abdomen is usually red. (3) The Stable fly (*Stomoxys calcitrans*) has piercing mouthparts and the thorax has a pale spot behind the head. (4) The Little housefly (*Fannia canicularis*) and Latrine fly (*Fannia scalaris*) are noticeably smaller than the housefly, though similar in appearance. (5) The Face fly (*Musca autumnalis*) has the top and sides of the abdomen entirely gray-and-black, whereas the housefly abdomen has



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yellowish sides. (6) Other flies either lack the 4 dark thoracic stripes or the dull gray thorax and abdomen background coloration.

Biology. The adult female lays her eggs (white, oval, 1/32 inch long) singly but usually in clusters of 25 to 50 for a total of 75 to 150 per batch and will lay 5 to 6 batches in her lifetime totaling 350 to 900 eggs (maximum 2,387 in 21 batches). Eggs are laid in moist materials, hatch in about 8 to 20 hours, and the larvae (maggots) go through 3 instars (growth stages between molts) in 3 to 7 days. The full grown larva seeks a cool, dry place to pupate, migrating up to 150 feet in 3 to 4 days. The pupa start out yellowish and changes to black; this stage takes 3 days to 4 weeks depending on temperature and humidity. After emerging from the pupa, about 1 hour is spent drying the wings and hardening the body; normal activity starts at 15 hours. Depending on conditions, developmental time (egg to adult) may require as few as 6 days. There may be as many as 10 to 12 generations per summer. Adults usually live 15 to 25 days.

House flies are general feeders, being attracted to a wide variety of substances from excrement to human foods. Because of their sponging mouthparts, they can feed only on liquids. However, through regurgitation they are able to liquefy many desirable solid foods. Also, a house fly excretes and regurgitates whenever it comes to rest. This habit, coupled with its many body hairs and bristles and the sticky pads at the base of the claws on each leg, make house flies well adapted for transporting disease organisms.

House flies have been shown to harbor over 100 different kinds of disease causing pathogens, many of which are associated with filth. Such pathogens include those causing typhoid fever, cholera, diarrhea, dysentery, tuberculosis, anthrax, ophthalmia, polio, and salmonellosis, as well as parasitic worms. They have been shown to be disease pathogen transmitters via their vomit, feces, and contaminated external body parts.

Habits. Although houseflies have been shown to migrate up to 20 miles, most stay within 1 to 2 miles of their release point or larval habitat if sufficient food is available. Females seek almost any warm, moist material with sufficient food for larval development for egg-laying purposes.

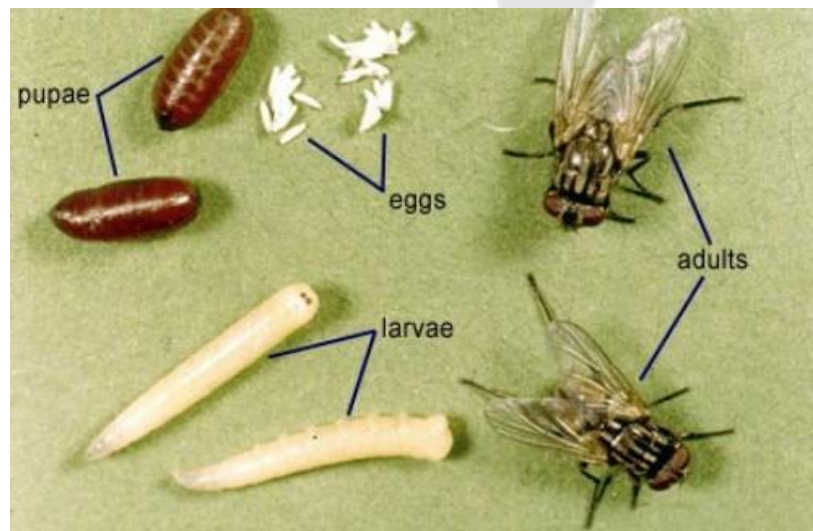
During the day, houseflies tend to rest less than 5 feet from the ground on walls, floors, and various objects. At night they rest primarily above 5 feet on ceilings, walls, electric wires, dangling light cords, edges/corners of buildings and plants. Their night resting places are usually near their daytime food sources.

Cultural & Professional Control. Housefly control is a 5-step process that includes identification, inspection, sanitation, mechanical control, and insecticide application. The first 4 steps should be a cooperative effort

involving the customer and Varmet Guard pest management professionals. The fifth step is the responsibility of the Varmet Guard technician:

1. The first step is to determine that the problem is house flies.
2. Inspection involves locating the fly breeding and larval developmental sites. It is sometimes helpful to do this at night when the flies are resting near their food and/or larval developmental sites.
3. Sanitation involves the removal or elimination of the larval developmental sites. This may involve the timely emptying and cleaning of garbage receptacles to rendering the fly problem so that mechanical and insecticidal measures will be more effective.
4. Mechanical controls consist of garbage receptacles with tight-fitting closures, tight-fitting windows and doors, windows securely screened if they can be opened, doors with self-closures, sealing around all utility penetrations through exterior walls, screening all vents securely, and the strategic installation of air curtains.
5. A Varmet Guard technician using appropriately labeled pesticides will perform insecticide applications. Outdoors, this includes the treatment of dumpsters, treatment of vertical walls and door jams adjacent to dumpsters and other breeding sites with liquid residual insecticides and the use of fly baits and/or toxic fly perches near adult feeding sources. Indoors, the use of residual insecticide spot treatments of fly resting surfaces away from food preparation surfaces may be appropriate. However, applications of pyrethrum aerosols (i.e., “fogging”) to knock down adult flies will provide only temporary control and will not prevent breeding and re-entry of houseflies and other fly species indoors.

The strategic placement and subsequent monitoring of insect light traps (ILTs) and scent lure sticky-surfaced traps can be performed and by the technician to help reduce numbers of flies that get indoors.



House fly life cycle: egg → larva (maggot) → pupa → adult.