



CAES

The Connecticut Agricultural Experiment Station

Putting Science to Work for Society since 1875

Founded in 1875

Putting science to work for society

Dr. Gale E. Ridge
Department of Entomology
The Connecticut Agricultural Experiment Station
123 Huntington Street, P. O. Box 1106
New Haven, CT 06504

Phone: (203) 974-8600

Fax: (203) 974-8502

Email: gale.ridge@ct.gov

Website: <https://portal.ct.gov/caes>

MOTH FLIES (*Psychodidae*)

Moth flies (*Psychoda* spp.), also known as drain, sewage, or filth flies, are considered a household nuisance, because they breed in the accumulated gelatinous film on the walls of drains. Adults are seen most commonly in bathrooms. They can become very numerous in homes and sewage disposal plants. Moth flies breed in unsanitary conditions. These insects do not bite.



Whitney Cranshaw, Colorado State University, Bugwood.org

Fig. 1: Moth fly

Description

Eggs are minute. They are brown to cream in color. In the home, females lay irregular egg masses ranging in number from 30 to 200 eggs, in organic gelatinous film lining drains, particularly in bathtubs and showers.

Larvae are the thickness of a thin pencil lead and are 3/8 inch long when fully grown. They are eyeless and legless. The head is darker and narrower than the body. The posterior or terminal segment narrows, forming a dark colored breathing-tube. Across the back of each segment are one or more dark rectangular bands.

Pupae resemble minute grains of brown rice. They occur on the surface of the organic film that the larvae have been living in.

Adult moth flies are small and hairy, approximately 1/16 to 1/4 inch long (Fig. 1). They look like tiny moths. When resting on a wall, the wings are folded over the back of the insect in the shape of a peaked roof. On close examination, the hairy wing veins are numerous and lie parallel to one another. There are no cross veins in the last two thirds of the wings. Antennae are long and depending on the species, consist of 12 to 16 segments. Each antennal segment is bulbous in shape with a ring of long hairs. Adult

coloration is variable from yellow through gray to black. Moth flies are very weak fliers covering only a few feet at a time in short erratic flights. Outside, they can be blown considerable distances by the wind.

Biology and habits

During the day, adult moth flies are often seen sitting on vertical surfaces not far from the breeding source. They are most active during evening hours; often hovering over drains and sinks. Adults are also attracted to lights.

Moth flies breed in rich organic decaying material. In natural conditions, this would be in wet decaying plant and animal matter. They can be found breeding in the foul water of clogged roof gutters and storm drains, air conditioners, cooling towers, rain barrels, birdbaths, and bird feeders, under potted plants, in dirty garbage cans, in moss, and anywhere that is shaded, moist and organically rich. They are common in sewage filter beds, around septic tanks, and moist compost. Inside the home, they are found in the outflow pipes of toilets, showers, bathtubs, washbasins, and sinks.

Eggs hatch 32 to 48 hours after being laid, when ambient temperatures are 70°F. Larvae feed on algae, bacteria, fungi, microorganisms, and the surrounding decaying organic media they are in. After 9 to 15 days, the larvae pupate. Sewerage plants consider the larvae important organisms along with the "organic film" for the purification of sewage water. Pupation lasts, 20 to 40 hours. Development time from egg to adult is 7 to 28 days depending on temperature and food availability. Adults live for about two weeks and feed in polluted water and on the nectar of flowers.

Control

Locate where the adults are coming from. Place a clear glass or plastic cup over a drain or sink outflow. Plug overflow hole, if there is one, and leave undisturbed overnight. If the flies are coming from that source they will be seen resting on the inside of the cup. Toilet seals may fail and adult flies can emerge from beneath the foot of the toilet. Put a two-inch wide scotch tape band around the base of the toilet to catch any adults if they are there. Eliminate any breeding site by manually cleaning drain walls and traps with a stiff brush.

Using Pyrethrin or pyrethroid aerosols labeled for indoor use can control adults. Read the manufacturers' recommendations carefully before treating for moth flies. In heavy or difficult to control infestations, consider consulting with a professionally licensed pest management professional.