

# Moth Flies

**Scientific Name:** *Psychoda* spp.

**Order:** Diptera (True Flies)

**Family:** Psychodidae (Moth Flies and Sand Flies)

**Identification and Descriptive Features:** Moth flies are small (ca 2 mm) dark colored flies that somewhat resembling the appearance of a miniature moth. Their wings are densely covered with hairs, giving them an overall fuzzy appearance and they produce a sooty smear when crushed. Common species are light tan-colored, to dark brown or grayish brown. Light mottling patterns the wings of many species and, when at rest, their wings may be spread or held rooflike over the abdomen. The antennae are long and fuzzy.

Larvae are rarely observed but have brown plates that cover the last body segments and ensheath the head. The spiracles project from the end of the body.

**Distribution in Colorado:** The genus *Psychoda* includes 21 species with many of widespread distribution and several that may be encountered indoors. Common species that have been widely spread by human activities include *Psychoda alternata* Say, *P. pusilla* Tonnoir, *P. trinodulosa* Tonnoir, *P. umbracola* Quate, and *P. uniformata* Haseman.

**Life History and Habits:** Larvae of moth flies are scavengers that feed on microorganisms associated with decaying vegetation, manure, and other nutrient-rich materials. They live in moist habitats, notably embedded within the gelatinous bacterial film that coats drains, sewage filter beds and similar sites where nutrients regularly pass. Because of this habit they may commonly be known as “drain flies”, “filter flies” or “sewage flies”.



Figure 1. Moth fly.



Figure 2. Moth fly, side view. Photograph courtesy Ken Gray Collection/Oregon State University.

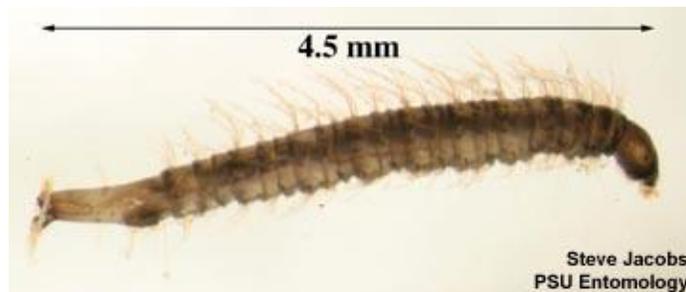


Figure 3. Moth fly larva. Photograph courtesy Steve Jacobs, Pennsylvania State University.

The life cycle can be completed rapidly, typically in a couple of weeks. Adults lay masses of eggs on areas of food and eggs hatch within a day or two. At normal home temperatures larvae may complete development within 8-15 days. Pupation also occurs at the larval feeding site and is completed within 48 hours.

The adults are weak fliers and typically rest during the day in shaded areas. Most flight activity is at night and they are attracted to lights, particularly following their emergence. They feed on polluted water, nectar, and other moisture sources but live only a short period of time, less than ten days. Multiple generations are produced during spring and summer

Where food sources are favorable tremendous numbers may be produced; large migrations of moth flies from sewage filter beds have been reported to be a problem in the past. Within homes, small populations may be present in association with normal plumbing. Large numbers of moth flies within a home typically occur following drain leaks or pipe breaks, allowing them to breed under slabs and flooring. Moth flies may also build large numbers in greenhouses, food handling facilities, and other facilities where moist organic material is allowed to collect.

**Related Species:** In addition to *Psychoda*, representatives of four other genera of Psychodidae are known from Colorado: *Pericoma*, *Telmatoscopus*, *Maruina*, and *Lutzomyia*. The latter is in the Phlebotamine subfamily (Sand Flies) that develop as blood feeders. Colorado *Lutzomyia* species are associated with reptiles and small burrowing mammals.