



Cluster Fly, *Pollenia rudis* (F.)
Diptera: Calliphoridae

Theresa A. Dellinger and Eric Day, Department of Entomology, Virginia Tech

Description Adult cluster flies are medium-sized, robust, somewhat bristly flies about 7 mm (0.3 inches) long. They are brownish-gray with numerous short yellow hairs on the thorax, a checkered pattern on the abdomen, and large, reddish-brown eyes. Adults are typically slow fliers. In the fall they begin to cluster in the sun on the warm sides of buildings, outcroppings, fences, and other prominent structures as they seek protected places to overwinter. They may enter houses and other buildings in large numbers. Homes built on the top of a hill or otherwise stand out in the landscape may attract many cluster flies. While cluster flies are a nuisance in the home, they do not bite, are not associated with the transmission of disease, and do not reproduce inside buildings. Cluster fly larvae (maggots) are parasites of earthworms and develop in the soil. They are not known to reduce earthworm populations to the extent that they disrupt soil ecology.



Adult cluster fly (*Pollenia* sp.) outdoors.
(Susan Ellis, Bugwood.org)



Side view of an adult cluster fly (*Pollenia* sp.).
(Joseph Berger, Bugwood.org)

Life cycle Cluster flies have a complete life cycle consisting of egg, larval, pupal, and adult stages. Adult females lay their eggs in the soil near the entrance to earthworm burrows. The larvae hatch and travel in search of an earthworm host. Each larvae burrows into an earthworm and consumes the host internally until ready to pupate. Pupae are shaped like rounded ovals encapsulated with a tough brown skin that protects the developing fly. Adult flies emerge from the soil to find mates and lay more eggs. Multiple generations occur each year with adults overwintering in houses and other structures.

Damage Adult cluster flies do not bite humans or animals. They are a primarily a nuisance when they enter buildings to overwinter, where people object to their presence. Adult cluster flies are often seen spinning on their sides on windowsills or floors while buzzing loudly. They typically do not live long inside homes, which are usually too hot and dry for their survival. Dead cluster flies may attract carpet

beetles, whose larvae feed on dead insects. Large numbers of dead cluster flies may have a disagreeable smell.

Habitat Typically found in rural and suburban areas with large fields, pastures, or yards that support large populations of earthworms.

Control Limit the entry of cluster flies into homes by sealing all gaps and crevices, especially in attics and upper areas of the house. Install good window and door screens with a tight fit. Fine mesh screening may be used with vents. Flies that have entered a home through the exterior wall may gain entrance into the interior living spaces through gaps around ceiling lights and exhaust fans, cracks behind baseboards, and poorly-fitting doors to attic spaces. Vacuum flies off windowsills and floors, but empty the vacuum canister so the dead flies do not attract carpet beetles. Insecticides applied to wall voids and the attic may kill cluster flies, but this will also cause problems with carpet beetles unless the dead flies can be removed promptly. Light traps and sticky traps are good choices to control flies indoors. Cluster flies may leave a greasy spot when killed with a fly swatter due to the fat the fly accumulates to live on over the winter.

Several professional-use materials are available as perimeter sprays to prevent the adult flies from entering a home to overwinter. However, these pesticides should be applied in early fall before the flies begin to cluster. Many homeowners forget to have a licensed pest control operator treat their home before the flies appear and then it's too late to prevent some of them from entering the home. See the Virginia Pest Management Guide for Home Grounds and Animals for the current recommendations for perimeter sprays against cluster flies. These perimeter sprays usually have a short residual span because sunlight quickly degrades them.

Interesting Fact Cluster flies are sometimes called attic flies because they are found in attic spaces beginning in the fall. Another common name for cluster flies is buckwheat flies because they give off an odor similar to buckwheat honey when crushed.