

# BIOLOGY AND CONTROL OF EYE GNAT

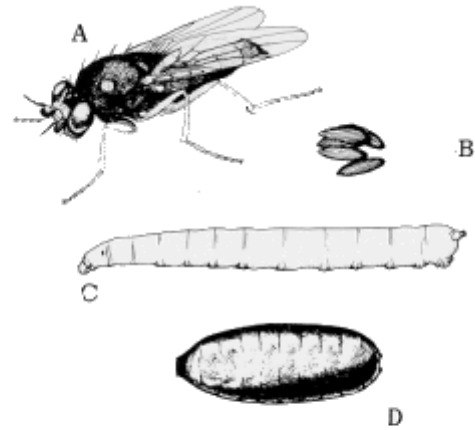
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(Picture taken by Dr. J. Butler, UF, Gainesville, FL)

Recently, rainfall & moisture in our area has increased decaying plant leaf litter, weeds, grass clippings, and flowers. Meanwhile, the decaying organic matter and moisture in the soil produce a large number of eye gnats. AMCD received many customer calls requesting service and placing complaints. People think they are mosquitoes, but they are not.

Eye gnats are not mosquitoes and do not bite. They are tiny and considered true flies (Diptera: Hippelates sp.). There are a couple of species around our area. Adult fly size is 1.5-2 mm and are dark gray or black-bodied flies with clear wings. They fly during the daytime and buzz around human and animal eyes. They are classified as nuisance insects and are attracted to sebaceous secretions, pus, and blood.



Eye gnat . A, Adult. B, Eggs. C, Larva. D, Puparium.

**Life Cycle:** Eggs, larvae (3 stages), pupae, and adults (male & female). Clusters of eggs (about 50 eggs laid by a female) are deposited on or in the soil (contain abundant decaying plant and animal matter, such as weed, grass, vegetable matter, leaf litter and sufficient moisture) by females flies. Larvae are tiny maggots and develop in several stages over 7-11 days in warm weather. Larvae pupate close to the soil surface and emerge as adults in about a week. Development from egg to adult can occur in about 3 weeks. They can occur year-round and may be locally abundant at certain times of the year, when conditions are favorable for their development.

**Medical Importance:** Eye gnats swarm around the head with an annoying persistence, darting at the eyes, mouth, nose, ears, or wounds of humans or other animals. Their labium (mouth part) contains a spine that helps the introduction of pathogenic organisms. In this way, eye gnats could aid in the transmission of acute bacterial conjunctivitis or "pinkeye" to

humans, and anaplasmosis organisms to cattle.

**Control:** Preventive application for skin and clothes may help. Commercial repellents for mosquitoes, provide temporary relief from eye gnats. Applications of insecticides (ULV) on a community-wide basis may provide temporary control of adults. Removing leaf litter, weeds, grass clippings, and flowers, before decaying, are of a great help for eye gnat prevention. Other control methods include using sticky traps and poison bait for adult fly control, liquid egg bait traps, and different types of attractant baits (available online or in local stores) that are placed in mostly active areas.

It is important to educate the public by letting them know how to prevent the gnats from being a nuisance problem even if they are not mosquitoes. Additionally, they may contact local pest control agencies.