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## **Pest Check**

### **Fungus Gnats Fluttering Around**

Be aware of the possibility of fungus gnats being brought into structures as we begin to bring outdoor plants indoors. Your plants could have become infested with fungus gnats during warmer weather and then these plants are brought indoors. This could result in more flying insects fluttering around indoors.

Adult fungus gnats are small, 1/8 to 1/10 inches in length, grayish black in color, have a slender body with long legs and antennae. They also are identified by the Y-shaped wing vein. Fungus gnats are typically weak fliers, so they usually remain near the potted plants, resting on foliage or growing media.

Fungus gnats undergo complete development: egg, larva, pupa and adult. Female fungus gnats lay tiny, oval semi-transparent eggs in moist organic debris. Fungus gnat larvae are legless, white to clear in color, with shiny black heads. They eat organic mulch, compost, root hairs, and fungi. The larvae can damage roots of plants, causing wilting, poor growth and loss of foliage. Then the flies pupate in the soil within silk-like cocoons. The complete lifecycle from egg to adult occurs in around 4 weeks, with continuous reproduction occurring in controlled environments.

### **Some Suggestions for Control Measures:**

#### **Prevention**

- 1) Inspect plants before purchasing and use sterile potting soil.
- 2) Allow soil to dry for several days to kill some larvae, since over watering, poor drainage and water leaks can result in a large population of fungus gnats. If the top layer of the soil becomes dry, then the larvae will die and the females will not lay eggs in the soil.
- 3) Discard plant, if heavily infested as to avoid infesting other plants.

#### **Biological Control**

- 1) Some larvae predators including *Steinernema* nematodes and *Hypoaspis* mites can be applied to the soil.
- 2) *Bacillus thuringiensis israelensis (Bti)* can be applied soil to control larvae.

## Chemical Control

Larvae can be controlled by many chemicals, including azadirachtin and imidacloprid. Adult fungus gnats can be controlled by foliar treatments, such as those containing bifenthrin, permethrin, resmethrin, and neem oils.



Picture of fungus gnat. Photo by Texas A&M University:  
<http://hortipm.tamu.edu/pestprofiles/other/fungnatd/fungnatd.html>

## Irritating Earwigs Entering Structures

Earwigs are abundant in Texas and can become a pest when they invade structures during unfavorable environmental conditions. These insects have flattened bodies, so they can easily enter through any small cracks. However they are only accidental invaders, so they can not reproduce indoors.

Ten species of earwigs occur in Texas, but only three or four are a common problem (the ringlegged earwig, *Euborellia annulipes* (Lucas), the riparian earwig, *Labidura riparia* (Pallas), the linear earwig, *Doru lineare* (Eschscholtz), and the brown-winged earwig, *Vostox brunneipennis* (Serville)). They range in size from  $\frac{1}{4}$  to  $1\frac{1}{4}$  inches and are brown to black in color. All earwigs have a pair of hardened abdominal forcep-like appendages that can pinch. Adult earwigs also have a short, leathery pair of wings and a second pair of membranous wings that may be folded underneath the first pair.

Earwigs are active at night and seek dark places to rest during the day, such as underneath rocks, bark, and plant debris. They feed mostly on dead and living insects and

mosses, lichens, algae and fungi. When found indoors, they feed on sweet, oily and greasy foods.

Earwigs usually do not harm humans, but they can emit a foul-smelling, yellowish-brown liquid from their scent glands. It is a superstition that the insect would enter the ear of a person and bore into the brain.

### **Some Control Options:**

#### **Some Non-Chemical Control Options:**

- 1) Eliminate any moist conditions such as in crawl spaces under homes, around outside faucets, air conditioning units and other places.
- 2) Keep grass and weeds cut short around foundations.
- 3) Reduce outside lights at night, since these tend to attract earwigs.
- 4) Use caulk and weather-stripping around doors, windows, pipes and other places to exclude them from crawling indoors.

#### **Some Chemical Control Options:**

Usually large populations of earwigs do not develop, so chemical control is not needed. However if chemical control is desired, insecticides should be applied outdoors around foundations, in flower beds and under subfloor crawl spaces to limit earwig entry into structures. Insecticides such as those containing pyrethrins, permethrin or bifenthrin can be used. Indoor applications have limited value, since earwig populations do not establish indoors.



Photo of ring-legged earwig, *Euborellia annulipes* (Lucas)(Dermaptera: Carcinophoridae). Photo by Bart Drees, Professor and Extension Entomologist, Texas A&M University.

## **Prevention of Larger Animals Entering Homes This Season**

As the weather becomes cooler, wild animals may move closer to or into structures. They are ultimately in search of warmth and may invade under structures or in attics. It is always easier to prevent invasion than to remove them. This makes EXCLUSION the key to the prevention of wildlife invaders. Exclusion is the best way to prevent entry and can be accomplished by using steel mesh or steel wool. Steel mesh can be used to close off entry points such as around whirly birds, vents and other openings in the attic. Weep holes, cracks and crevices can be sealed using steel wool. Both steel wool and steel mesh can be found at hardware stores.

Trees should also be trimmed away from structures. When tree limbs are touching houses, it becomes a perfect bridge for the animals to enter homes.

Also proper sanitation is important to prevent animals from approaching homes. All food containers should be cleaned and properly contained in closed bins, in order to avoid animals entering garbage or recycle containers. Bird seed and other food items should be stored in a sealed container. Clothes, blankets and fleece should also be stored in sealed container, in order to avoid rats and other animals nesting in the materials.

If wild animals are living in or near your home, you must first figure out what animal it is before control should be taken. Mice and rats can be trapped using sticky or snap traps. These traps should be placed perpendicular to the wall, in areas where you see droppings, gnawing, urine stains, or scratch marks.

Call the city or wildlife department if larger animals are believed to be living in homes/structures. Most departments will donate a live cage trap for a period of time and most cities will pick up the trapped animals when they are caged.

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