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Flickering and Fluttering Fungus Gnats

Adult fungus gnats can be found in almost all plantings. They are primarily a pest insect in greenhouses, but they can become a problem in houses in the winter. Houseplants may become infested with fungus gnats during warmer weather and then are brought indoors, which allows them to continue developing indoors. Adult fungus gnats are 1/8 to 1/10 inches in length, grayish black in color, slender bodied with long legs and antennae. They also are identified by the vein pattern on their wings, since they have a Y-shaped wing vein. Fungus gnats are typically weak fliers, so they usually remain near the potted plant or rest 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, elongate, 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. Pupation occurs in the soil in silk-like cocoons. The complete lifecycle from egg to adult usually occurs in about 4 weeks, and they continue to reproduce throughout the year, especially in controlled environments such as greenhouses or homes.

Some Suggestions for Control Measures:

Some Prevention Methods

- 1) Inspect plants before purchasing and use sterile potting soil.
- 2) Allow soil to dry for several days to kill some larvae, since overwatering, poor drainage and water leaks can result in a large population of fungus gnats. If the top layer of the soil becomes dry 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.

Some Biological Controls

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

Some Chemical Controls

- 1) Larvae can be controlled by many chemical drenches, including the chemicals azadirachtin, fenoxycarb and imidacloprid.
- 2) Adult fungus gnats can be controlled by foliar treatments, including the chemicals bifenthrin, permethrin, resmethrin, and neem oils.



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

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