Fighting Fungus Gnats

As we move past the first frost date and people start moving their plants indoors, they could unknowingly be bringing in some future unwanted guests. Fungus gnats (specifically dark-winged fungus gnats) are common insects that use areas of wet soil for an egg-laying site. They usually like damp, dark areas, so if you live in a wooded area or have many trees on your property, they might be a part of your landscape. They might also use old rotting wood, leaf piles, or potted plants. If potted plants are brought inside, the warmth of our homes and ease of access to wet soil in the pot can help create a thriving population. If you notice what look like small mosquitoes in your home during the winter months, you may be dealing with a fungus gnat issue.

Fungus gnat larvae sometimes damage the roots and lower stems of plants growing in pots. Greenhouse growers routinely deal with and eliminate fungus gnats because of this. Usually in a home, the main problem is annoyance. Fungus gnats fly slowly around the house and are attracted to lights. This means they will fly towards televisions and computer screens while people are using them.

As you bring plants inside, you should consider using monitoring tools to see if fungus gnats have taken up residence. To check for adults, you can use yellow sticky cards staked near the plant. The adults like the color and get trapped on the glue covered surface. To monitor for larvae in the soil, take slices of raw potato (1/4 inch or so) and lay them on the surface of the potting medium. Check them before they dry out to see if maggots have attached to them to feed.

If you find that you have a problem with fungus gnats, you can use several methods to control the population. Changing the potting medium out for new stock removes the problem entirely but is not always feasible for certain plants. You can also run a fan over the pot to dry out the soil to reduce fungus gnat attraction or water less frequently. To treat them, you can try to mix a solution of 9-parts water with 1-part bleach and run it through the soil to kill larval gnats. Test this with lesser-desired plants first as some may not tolerate the mixture. For an organic approach, use a product containing Bt (Bacillus thuringinesis) specific to flies; one common trade name is “Gnatrol.” It will take time and effort, but if you follow through you can eliminate these pesky invaders!

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Figure 1: Fungus gnat adults are 1/8th inch long and are gray to gray-black. They have long, skinny legs and sort of resemble mosquitoes in shape and in flight. (Photo: Jim Kalisch; University of Nebraska-Lincoln)
Figure 2: Fungus gnat larvae are creamy white with a dark black head capsule. They have a slimy appearance and live in the upper layer of soil. (Photo: Jim Kalisch; University of Nebraska-Lincoln).