

Those Pesky Gnats! (Fungus Gnats) 2010, Year of the Fungus Gnat



Adult Fungus Gnats Stuck to Safer's Sticky Stik. Photo by Randall Prue. This may be a too-familiar sight to you, adult fungus gnats. Here we see them (where I like to see them) stuck to a Safer's Sticky Stik (any brand of yellow insect trap would work just as well). The gnats die quickly and cannot reproduce while stuck to the trap!

This "bonus" article is based on material reprinted from Keeping Them Alive, plus new material and illustrations. In the autumn of 2010, as we bring plants in from outside, I cannot help but notice that this is the worst year I can recall for fungus gnats (small enough to fly through most window screens looking for a warm winter home).

Adult fungus gnats measure approximately 1/50th to 1/32nd of an inch and resemble fruit flies. You will see them flying about or congregating near windows and lights, and of course hovering near your plants, and anywhere else they can find moisture (drains, for example). They like light, the color yellow, and moisture. The adults lay "eggs" (larvae) on soil, especially moist soil rich in organic matter (moss or leaf mold). They also love soil-less mix (like ProMix). Adult gnats appear to be almost suicidal. They are not hard to squish if you get close enough because they are not quick to flee. They just sit there. Squish, squish.



Mosquito Killer for Gnats?



Other Ways to Discourage Reproduction

The life cycle of the fungus gnat is 3 to 4 weeks long, and so you just may have to endure them for a few weeks. You definitely have to mount an all-out campaign if you want to be rid of these

pests quickly (most of us do).

Keep the soil dry! That is the simplest and most effective method that I know of to kill off the larvae and discourage egg-laying on the dry soil. One problem that might occur to you is that plants need water, so there is a limit to how dry you can keep the soil. Until the infestation is gone, I water all plants from the bottom (by giving just enough water for the plant's needs, and by adding it to the saucer under the pot). The roots manage to get at the water and since I do not use much water, there is not enough to wick up to the top few inches of the pot and wet the only (top) layer of soil that the gnats can lay their eggs in!

Almost the opposite approach, and one that I am reluctant to do very often, is to wait until the plant needs water and then immerse the entire pot in water to above the soil and allow it to soak overnight (to drown the maggots). You may have guessed why I am reluctant to do this. Imagine how many buckets, bathtubs, and sinks you might need to be able to soak a large collection of plants! You could add to the water any of a number of mild or non-toxic pesticides (rotenone

,
pyrethrum
or the synthetic look-alike
pyrethrins

). One of the problems with

this approach is that rotenone (banned in Quebec in some of its forms) kills fish. That means that you would not want to flush the water down a drain afterwards, so what would you do with

it? I am told (but I have not tried this) that ammonia will kill gnats.

Related methods of preventing egg-laying and hatching include (where space permits) adding a layer of sand (1 to 3 inches deep) on top of the soil. There is no moist organic matter in sand, and so any eggs laid should not hatch. If you are keeping the soil on the dry side (especially in the top inch or three), you can spread a layer of diatomaceous earth on top of the soil. D.E. is entirely non-toxic (they are tiny creatures from oceans), but to an insect, its texture acts like a layer of broken glass, and has the same effect: physical destruction by the death

of a thousand cuts. I like this method, but D.E. is only effective when dry, so you would have to replace it every time it gets wet (don't get it wet).

Lethal Potato: Here is a simple method that I did try, and with some success. Lay slices of fresh potatoes on top of the soil (dry soil is ideal for this, since the potato becomes the most inviting environment available). In theory, when you gather and discard the potatoes (in the compost pile, of course), you throw the unhatched larvae away with them. The instructions I found said to leave the potato overnight. I saw no larvae in the potatoes the next day, but a week later I did, highly visible. I think that the potatoes may attract *some* of the larvae, whereas the BTi is good at killing *all* of them! That said, I see no harm in using as many methods as are available to you.

Pickled Gnat Trap: This method involves attracting the gnats to fruit juice or apple cider vinegar inside a trap with small entry holes that they can crawl into easily (because their wings fold to enter a small hole) but from which they cannot escape easily (because their wings spread in flight, making them too large to exit through the small holes). There are several variations of this type of trap. I laid out open bowls of apple cider vinegar mixed with dish soap and that simply evaporated with no dead gnats in it. A little more effort is required in the making of the trap! Two types of trap can be made easily from items you would likely have in your kitchen (a bowl, a plastic bottle, some plastic wrap).

Using a Bowl: I used a small serving disk (similar to a ramekin) with an inch or so of apple cider vinegar to which I added some fruit juice. I covered that with clear plastic wrap. With a toothpick, I poked a dozen tiny holes into the plastic wrap. I placed the dish where I see the gnats flying around.

Ways to Kill the Flying Adults



Summary

- Fungus gnats are extremely annoying but mainly harmless.
- Fungus gnats are easy to kill, but it can take 3 to 4 weeks of effort to get rid of all of them.
- My favorite way of killing fungus gnats is with BTi and yellow sticky traps. BTi is bacillus turingiensis subspecies israelensis.

[enterprise-swallowtailed](#)