FEBRUARY HELPLINE HAPPENINGS
FUNGUS GNATS HOVERING IN MY HOUSE PLANTS

THE STUFF OF NIGHTMARES?

By: Alexandra Radbil

A GNAT BY ANY OTHER NAME



© Fungus gnat – Bugwood.org

- Gnat is a colloquial term for "small fly"
- Belongs to a suborder of flies called Nematocera (order Diptera) characterized by small antennae
- Several families of flies are considered gnats – no characteristics to identify them as a whole group

HOW TO ID FUNGUS GNATS



Bob Webster, Pryor, OK



Darkwinged fungus gnat maggots suspended in alcohol. Note their shiny, black heads.

Photo by J. R. Baker, NC State University

- Small, delicate, grayish-black, mosquito-like flies, 1/8" long, with long legs and one pair of clear wings, and antennae
- Distinct Y-shaped pattern on the forewings
- Larvae – 1/4" worm-like and translucent, with a black head capsule

WHY, WHEN, AND WHERE DO THEY APPEAR?

- Most noticeable during late fall and winter
- Found at base of houseplants, windowsills, kitchen, and bathroom drains – more a greenhouse pest than house pest
- Prefer moist, rich soils
- Overwatering plants contributes to the growth of the fungi on which the larvae feed
- Symptoms - sudden wilting, loss of vigor, poor growth, and yellowing

WHAT DO THEY DO?

- Adults are annoying but harmless to humans and indoor plants. Adults do not bite or feed
- Larvae are most damaging to seedlings, cuttings, and young plants – feed on root hairs, fungi, algae, and other organic materials
- Plant especially prone to larval injury: geraniums, African violets, carnations, poinsettias

MANAGEMENT

Determine source of infestation

- Adults

  – cover the plant or sink drain with screen or cheesecloth, check next day for evidence of flies

  – hang yellow sticky strips near plant or drain

- Larvae – insert ¼"potato slices into the growing medium - larvae migrate to slice, start feeding

Treatment – larva on houseplants

Cultural Control

- allow growing medium to dry between watering to depth of 1 – 2"
- change watering cycle to prevent soil from remaining wet

Mechanical Control

- re-pot, particularly when growing medium is retaining too much moisture
- If problems persist several weeks after watering practices have been adjusted, then:

Biological Control

- drench pot with microbial insecticide Bacillus thuringiensis subsp.israelensis (Bti)
- make several applications 5 – 7 days apart to control larvae until infestation is under control

Chemical Control

- insecticides containing pyrethrins or synthetic pyrethroids applied to soil can provide temporary control if adult infestation is severe (effective up to 3 days) but do not provide long-term control as they require repeat applications at short intervals (couple of days) to produce results
- larvae will not be directly affected by any insecticides applied to kill adults

Treatment – sink drains

- Use a commercial drain cleaner and/or clean out trap to eliminate the breeding site

Monitor

- Place yellow paper sticky traps in vicinity

LIFE HISTORY AND HABITS

Life cycle approximately 3 – 4 weeks; continuous reproduction occurs year-round on indoor plants

Larvae

- appear in the top 2 to 3" of the growing medium
- feed on fungi, algae, and decaying plant matter
- fully grown in 2 - 3 weeks
- pupate in or on the growing medium for 1 week

Adults

- have 7-10-day life span, females may lay up to 200 eggs

WEIRD FACTS and THE NIGHTMARE SWARM

- Flies and gnats evolved before dinosaurs - 247 million years ago
- Survived an apocalyptic world after Permian extinction
- Fossil record – gnats "captured" in amber



Fungus gnats preserved in amber - 35 million years ago. © Trustees, Natural History Museum/London

- Dark-winged fungus gnat larvae sometimes form a large migration mass called a Sciarid snake frightening and disturbing homeowners. https://youtu.be/FVdPq_eW2co





PHOTO CREDITS : © Iowa State University © Blake Layton

REFERENCES

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