

FUNGUS GNATS⁴

Damage symptoms

Larvae feed on root hairs and tunnel into plant stems, which provide entry points for plant pathogens (*Pythium*, *Fusarium*, and *Verticillium*). Adult fungus gnats carry plant pathogen spores on their bodies and serve as a source of infection for clean plants. Root feeding and tunneling disrupts normal nutrient and water uptake resulting in wilted or yellowish plants.

Plants attacked

Many greenhouse plants, in particular geranium and poinsettia.

General characteristics

Adults ($\frac{1}{8}$ th inch long) do not cause damage but may transmit fungal diseases. Larvae feed in stems or on roots and rotting vegetation at or below the soil surface. Low light, soil high in organic matter and wet warm conditions favor population increase. Adults are weak fliers. They resemble mosquitoes with dark bodies, relatively long legs, and long antennae. There is a distinct Y-pattern formed by veins in the wing visible with a hand lens. Larvae (about $\frac{1}{4}$ th inch long) are whitish or transparent with a black head. The life cycle can be completed in 12 to 27 days depending on temperature.

Mouthparts: Chewing (larvae)

Where to find fungus gnats

Adults usually rest on the soil surface of pots or plants. If disturbed they will fly around. Larvae are found burrowing in plant stems or on or beneath the soil surface. Potato wedges can be used to monitor for larvae and sticky cards for adults.

Management

- ✓ Reduce organic matter in potting mix.
- ✓ Monitor adult and larval populations and treat promptly.
- ✓ Use potato wedges to scout for larvae.
- ✓ Several biological controls are commercially available, including predatory mites, nematodes, *Bacillus thuringiensis*.
- ✓ Insecticides can be used as a drench against larvae or as a spray, fog or aerosol for adults.
- ✓ Several biorational insecticides are also effective.

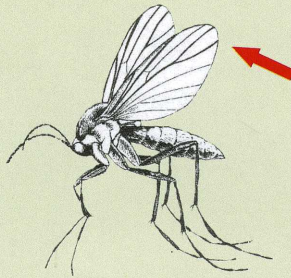
⁴*Bradysia coprophila* and *Bradysia impatiens* [Diptera: Sciaridae].



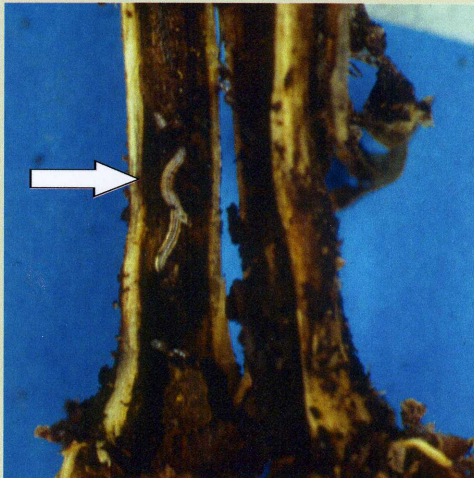
Arrow indicates black head capsule of fungus gnat larva (greatly enlarged).



Poinsettia damaged by feeding of fungus gnat larvae.



Adult fungus gnat. Note the long legs and antennae, and Y of the wing vein, indicated by arrow.



Fungus gnat larva tunneling in the stem.