Dark-winged Fungus Gnats, *Bradysia* spp.

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Order: Diptera **Family:** Sciaridae **Species:** *Bradysia* sp. **Common Name:** Dark-winged fungus gnat

Description: This is a small greyish-black fly. As an adult it is distinguished by the y-shaped wing veins on the front wing. The adults can transmit plant diseases but not human ones. The larvae feed on roots and decaying plant material. They can burrow up into the stem of plants and contribute to spreading decay within the plant roots and stem. They also can infest the home, either reproducing in potted house plants or in algae and sludge that are attached to the inside of the drain or pipe. **They do not bite or sting people**, but can be found flying slowly around the home which is annoying.

Biology. Fungus gnats have 4 developmental stages. The female adult lays her eggs on the soil surface, which hatch in around 4 days. She can lay 100-150 eggs over her 5-7 day life span. The egg hatches into a small legless maggot larva with a white body and black head. It burrows into the soil to feed. In 10 to 140 days (depending on temperature) the larvae begin to pupate. The pupal stage is a resting stage when the insect doesn't feed. It emerges from the pupal case after 3-4 days as a brownish grey adult with long legs. The adults are weak fliers but can readily walk around on the soil surface. The adults mate and the cycle begins again.

Management in the home: The key to managing any household pest is to locate the source of the infestation. If they are only found in one room, it is likely the infestation is there…somewhere. If you are pretty sure they are coming from the drain, place duct tape over the drain overnight and see what you catch in the morning. Yellow or white sticky cards are also effective methods of detection, but they will not eliminate the problem if you don't get rid of the habitat where the larvae are reproducing. Even if the adults are sprayed, the larvae are protected in the soil or drain and will emerge again. Infested house plants can be removed. Reducing the watering of potted plants in the home will also reduce the problem if that is where they are coming from. Repotting the plant in clean uninfested soil will help, but it is possible some larvae are hidden in or around the roots which are difficult to detect. Reducing the amount of organic matter in the soil will

Summer swarms. In recent years in some areas of Vermont, large swarms of dark-winged fungus gnats have been observed congregating on the outside walls of buildings or flying in large groups. Occasionally long trails of fungus gnat larvae are also observed on the ground. Fungus gnat larvae inhabit moist places outside where organic matter levels are high. Sometimes in nature the life cycle is synchronized such that large numbers emerge from the pupal stage and fly around. They only live for around 1 week, during which they mate and lay eggs. There is no point in spraying them with an insecticide given that they are so short lived. They don't bite and therefore do not transmit diseases to people. These swarms may occur in places that have been flooded recently, or near swampy areas with an abundance of organic matter in the soil. To keep them out of the house, make sure there are no gaps around the windows or screens. It is also best to turn off outdoor lights which may attract them, and close the curtains at night to eliminate the light from shining outside. The adults can be sucked up in a vacuum cleaner if they congregate in one location. Empty the bag after collecting them so they don't fly out again.