Chironomid Midges

Chironomid midges (gnats) are small flies that range in size from $\frac{1}{16}$ to $\frac{1}{2}$ inch long. They range in color from light tan to light green to nearly black, depending on the species. Midge larvae are small and wormlike and develop in lakes, ponds, slow-moving streams, drainage ditches, wet mud and even in highly polluted sewage water. They feed on algae and organic matter in the water, and in turn, are readily fed upon by fish. In addition, midges typically have “fuzzy” antenna, a characteristic found, to a lesser extent, only in male mosquitoes.

**Management strategies**

**Larvae**

Finding and eliminating the sources of midge larvae should be the first consideration when you have a problem. Look for habitats where they develop and, if possible, use ditches to drain away areas of standing water. If the midge population is developing in a permanent water source that is not drainable, and there is sufficient space to support them, fish can be introduced into the habitat to reduce midge populations to a tolerable level. Several species of fish will feed on midges, so select a fish that is suitable for the type of water source you have.

Insecticide treatments that kill midge larvae in water may be the only remedy if the population is associated with residential or municipal lagoons. Be extremely cautious when applying insecticides to these midge habitats. Inappropriate applications of insecticides to water can lead to severe consequences if the products are not used according to label directions. The label must indicate that the insecticide is approved for use on midge larvae and that it can be applied to standing water sources. You cannot apply products labeled for flying midges (adults) because these products are not safe when applied to water.

**Caution:** An insecticide treatment will kill desirable insect species living in the water, in addition to midge larvae; so make sure a problem is severe enough to justify the use of an insecticide.

Insecticides used to control midge larvae are usually also registered for controlling mosquito larvae and are normally available through a mosquito control supply company. Examples include temephos (Abate), methoprene (Strike), and Bacillus thuringiensis var. israelensis (Bti) (Teknar, Vectobac). However, residue tolerances from temephos in fish have not been established, so it is currently illegal to consume fish caught from bodies of water treated with temephos. When using Bti, remember that it needs to be consumed by midge larvae and that water with high organic content has plenty of other food suspended in the water. In these situations Bti is only effective at higher rates of application (at least 10 times the rate for mosquitoes). This normally limits use of Bti to smaller habitats.
**Adults**

Adequate control of adult midges is difficult. Because their attraction to light makes them a nuisance, try these suggestions:

- Reduce overall lighting on the outside of your home by turning off unnecessary lights, using less powerful light bulbs, and installing yellow lights instead of white.
- Eliminate situations where indoor lights are shining directly through windows, or cover your windows by closing blinds and curtains.
- Delay turning lights on for as long as possible in the evening, the period of highest midge activity.

**Note:** Light traps that attract and “zap” insects will kill a lot of midges, but they rarely eliminate a high percentage of the local population. In fact, since the light in these devices is highly attractive, you may be inviting more nuisance midges to your home than if the light trap had not been used in the first place. If you decide to use a light trap zapper, place it as near to the midge source as possible and as far away from human activity as possible.

Machines that produce an insecticide fog can provide temporary relief from midges. Two types of foggers are commonly available and are used with specially formulated insecticides. Thermal foggers heat the special formulation, producing a smokelike effect. ULV foggers disperse tiny particles of insecticide. Both machines rely on air currents to move the insecticide fog across an area of suspected activity. When considering insecticide fogs, remember that these treatments give only temporary relief and should only be considered if they can be applied within an hour or two before an outdoor function such as a yard party or wedding reception. You will normally need to contact a professional pest management company for this service.

Some midge adults will undoubtedly find their way inside homes. In these instances, temporary relief can be obtained by spraying flying adults with a household aerosol containing synergized pyrethrins or pyrethroids (several products with names ending in -thrin).

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