

***Providing Leadership in Environmental Entomology***

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## MIDGES

If your home or recreation area is near a pond, lake, or a slow moving river or stream, you may have been “swarmed” by nuisance flies you thought were mosquitoes. It is a good possibility that they were mosquito-like flies called midges. Unlike female

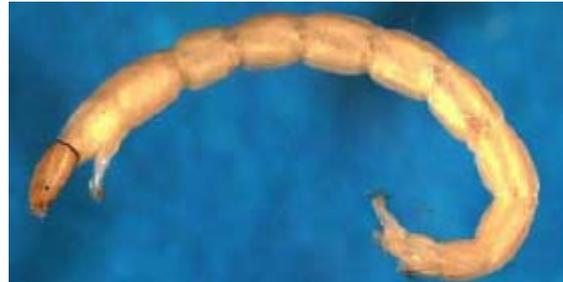


Chironomid midge.

*Photo credit: Colorado St. Univ. Ext.*

mosquitoes, these flies do not bite. Midges also differ from mosquitoes in that they have a much shorter snout known as the proboscis. Midges are soft-bodied and range from 1/32 to 1 3/8 inch in length. They have long legs and antennae that are either feathered (females) or bushy (males). More than 800 species of midges occur in North America. Midges belong to the family of non-biting flies called Chironomidae and should not be confused with no-see-ums, punkies or biting midges in the family of flies called Ceratopogonidae. Midges are commonly referred to as “nuisance” flies.

Midges are attracted to light. They usually congregate on window screens or around porch lights and street lights. In some situations, where swarms are thick, allergic reactions from breathing in these insects have occurred. Swarms also are known to cause traffic hazards because the number



Chironomid midge larva.

*Photo Credit: NC Dept. of Environ. & Nat. Res.*

of midges can be very high. Most swarms are made up of male midges listening for the wing beat of a female.

### Life Cycle

Midges are one of the most abundant insects in aquatic habitats and develop through the four stages of their life cycle in and around water. First, adults lay thousands of eggs in gelatinous masses on the surface of water or aquatic vegetation. These eggs then sink to the bottom where they hatch into larvae in 3 days to a week. The larvae burrow through the mud and build tubes to live in while they consume organic matter and other bottom debris. Midge larvae are major dietary components of bottom-feeding fish such as catfish and carp. They are also an important source of food for predaceous aquatic insects. In addition, midge larvae consume and recycle organic debris to help improve and clean the aquatic environment.

Midges have the unique feature of having hemoglobin in their blood. As the larvae continue to grow and develop, the hemoglobin causes them to turn red. The larval midge stage lasts from 2 to 7 weeks depending on environmental conditions. At the end of this period, the larvae become pupae, and 2 to 3 days later, the pupae rise to the surface where they emerge and become adults. The adults are not known to feed at all, and so they do not live more than 3 to 10 days. Their primary role as an adult is to reproduce.

### Control

Complete control of midges is impossible, and even partial control can be impractical and undesirable. Chemical applications in aquatic habitats can harm

non-target organisms along with the midges. Non-chemical methods such as reducing runoff from urban and agricultural operations that produce food for midges is more practical.

Some success in controlling midges has been reported by stocking smaller bodies of water with catfish, carp and goldfish at a rate of 150-500 pounds of fish per acre of water. If you decide to use this method be sure that you select a type of fish that will feed on the bottom of the water where the larvae live.

The easiest method to reduce the nuisance of swarms of midges when populations are high, is to keep lights off for approximately 45 minutes after sundown since 90% of the activity will occur before that time. If you want to continue lighted outdoor activities when midges are swarming, it is helpful to

locate light sources away from the home or area of activity, and point it back toward the area you want lighted. Just remember that it could be worse; these midges could be mosquitoes!

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