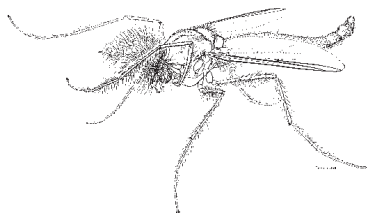


PEST CONTROL BULLETIN NO. 24

NON-BITING MIDGES

Chironomidae



GENERAL INFORMATION

Orange County residents living near ponds, lakes, flood channels and the Santa Ana River are frequently annoyed by swarms of small flies that resemble mosquitoes, but do not bite. These non-biting flies, called midges, belong to the family Chironomidae. Unlike mosquitoes, midges are incapable of biting because they lack the proboscis (piercing-sucking mouth parts) required for taking blood from a vertebrate host. Other characteristics that easily separate midges from mosquitoes are their overall smaller size, shorter scale-free wings that do not cover the terminal segments of the abdomen, and elongated front legs. Many midge species rest with their front legs extended and wings spread in a “V” pattern as illustrated in the figure above.

LIFE CYCLE

Female midges deposit eggs in jelly-like masses that float on the water surface. Depending upon the species, individual egg masses contain from 10 to over 10,000 eggs. The hatching time varies among species and is temperature dependent. Upon hatching, the young larvae will swim either to the bottom of the water source or to the surfaces of rocks and aquatic plants present in the water column. Once a suitable site is found, the larvae may either construct a burrow, silken tube or sheltered case from which they feed on a diet ranging from dissolved nutrients, fine particulate matter, algae, and other midges. Like all other insects which have a larval stage as part of their developmental cycle, midge larvae must molt their skin in order to grow. The last of four molts occurs when the larva transforms into a pupa. The adult midge usually emerges in one to three days

after pupation. Adult midges normally do not feed and only live long enough to mate and lay eggs. However, some species are known to live for several weeks and perhaps longer.

ECONOMIC AND MEDICAL IMPORTANCE

Midges are strongly attracted to white colored outdoor lights located within a quarter mile of their breeding sources. This attribute of their behavior creates quite a mess to residents living near water, particularly when enormous numbers (swarms) of adults emerge over a two or three day period. Large swarms can literally cover the sides of buildings, clog window screens, and cause discomfort or irritation when swarming midges enter the eyes, nose, and mouth.

Since midges do not bite or take blood, they are not considered to be of public health importance in the absence of having the capacity to transmit blood-borne pathogens such as encephalitis and malaria (mosquito-borne diseases).

CONTROL METHODS

The bottom dwelling habits of midge larvae compared to the surface habits of mosquito larvae presents a major physical barrier to chemical methods used in their control. Overall control is best achieved by source reduction (physical control) when the environment is either eliminated or modified to exclude midge colonization. Temporary relief from midge infestations is possible by periodically washing down infested surfaces with a garden hose and high pressure nozzle. Chemical sprays usually are quite useless because they only afford temporary relief.



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2006