

## *What are Midges?*

Midges are mosquito-like flies in the family Chironomidae, which are often mistaken for mosquitoes, but do not bite. They frequently collect in large swarms in the late afternoon or evening, and are often attracted to outdoor lights of houses close to streams, ponds and lakes. They can be a nuisance due to their large numbers, but are not considered a health hazard.

## *How do I know if I have Midges or Mosquitoes?*

If you encounter a large swarm of what appear to be mosquitoes but are not being eaten alive, they are most likely midges.

## *I like to enjoy the sunset, but the Mosquitoes are terrible. What can I do?*

Experts recommend you avoid going outside at dawn and dusk, since that is when mosquitoes are most active. This is, after all, Florida, and some mosquitoes go with the territory. We work hard to keep the mosquito population down to manageable levels, but complete eradication is not possible at this time. Keep in mind, however, that mosquitoes are not strong fliers, and breezy evenings are better than still ones to enjoy the sunset. You might also try using an electric fan, in addition to mosquito repellent and protective clothing.

## *I live next to a pond. Is that where the mosquitoes are coming from?*

Possibly. Most ponds contain fish, which eat mosquito larvae; however some also contain certain types of aquatic weed, which shelter the larvae from the fish. These types of mosquito larvae are able to breathe through the roots of these weeds, making them very difficult to treat through conventional means. For this reason, we also control two types of invasive non-native weeds: Water Lettuce and Water Hyacinth.



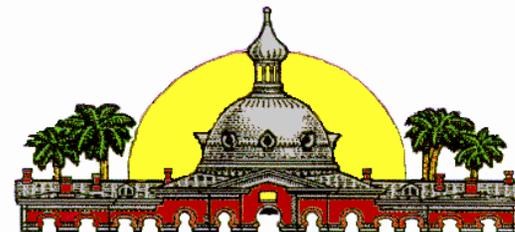
Water lettuce resembles heads of wild lettuce, is bright green and usually blankets water surfaces.



Water hyacinth has waxy dark green leaves and is most easily identified by its lavender blooms. While its flowers are quite lovely, it can quickly take over a pond or lake, choking out other vegetation, and providing larval habitat for several types of aggressive, nuisance mosquito.

## *Is West Nile Virus still a threat?*

Unfortunately, West Nile and several other Encephalitis viruses are a continuing threat here in Hillsborough County as well as other areas of Florida and the nation. For this reason, we routinely blood test our strategically placed sentinel chickens for exposure to these viruses. When we detect presence of mosquito-borne virus in a flock, we immediately step up our mosquito control activities in that area to prevent spread to the human population.



## **HILLSBOROUGH COUNTY MOSQUITO AND AQUATIC WEED CONTROL**

4220 TAMPA BAY BLVD.  
TAMPA, FL 33614

**(813) 554-5025**



# *Answering Your Questions*

# Where are the Spray Trucks?

When a citizen contacts Mosquito Control with a request for service, they are often understandably quite perturbed about the level of mosquito activity in the neighborhood, and seeking immediate relief. At one time our response to this type of request was to dispatch a spray truck to blanket the area with pesticide.

While this practice brought short term relief to the citizen in question, time and research has shown it to be ineffectual in the long run, and unnecessarily toxic to the environment. The concept of Integrated Pest Management dictates that we combine a variety of approaches to reduce the mosquito population, including source reduction and larviciding in addition to the use of aerosolized pesticides.

Our first response to a citizen's request for service is to physically inspect the area, to see if we can locate the source of the mosquitoes.



**It is often surprising to homeowners that such a large number of mosquitoes can be reared in a very small amount of water, such as a birdbath, stagnant fountain, bucket, or old tire.**



***Even bromeliads and other hollow-stemmed plants can be substantial mosquito nurseries.***

Mosquitoes need areas of standing water in which to lay their eggs. Once the eggs hatch, the water must remain for several more days while the mosquito larvae go through four growth stages before changing into pupa, and finally into full grown mosquitoes. Large swarms of mosquitoes in one area are often an indication of a breeding source nearby.

Our inspectors use a variety of tools to locate these areas of mosquito larval habitat, and once found, a small amount of larvicide is all that is required to prevent these larval mosquitoes from maturing into swarms of flying, biting adults. This is the most efficient and environmentally-friendly method of mosquito control at our disposal.

Even better than treating these sources is removing them, if at all possible. You, the homeowner can help with source reduction by rinsing out birdbaths, bromeliads and pet dishes, disposing of old tires and other yard debris, and keeping your rain gutters clear. Ornamental fish ponds should be stocked with fish, which will eat mosquito larvae.

Unfortunately, we can't eliminate all mosquitoes, especially in large areas of cypress forest, where mosquitoes like to rest in the daytime. For residents of these areas, we can often provide a

"barrier" spray which will keep the mosquitoes at bay for up to twelve weeks, depending on rain and exposure to sunlight. To do this inspectors use a hand-held gasoline-powered sprayer to coat the underside of the surrounding vegetation with a Permethrin-based pesticide. (Permethrin is a synthetic version of Pyrethrum, which comes from Chrysanthemums). This kills mosquitoes it contacts, and robs the remainder of their daytime resting places.

## What Next?

As part of our targeted approach to adult mosquito control, we use data compiled from mosquito traps placed throughout the county, customer requests for service and our inspectors' first-hand observations. This information combined with wind and temperature readings allows us to determine the most effective areas to deploy our spray assets for maximum control. Our spray trucks (and helicopter) use Ultra Low Volume technology – emitting micro fine droplets of pesticide which linger in the atmosphere until they encounter a mosquito. Each droplet is calibrated to be just the right amount of pesticide to kill a mosquito, yet 100 drops could fit on the head of a pin! This allows us to use a smaller amount of chemical, which is environmentally (and economically) beneficial.

