

Mosquitoes came early, living longer this rainy, rainy year

By JEFFREY STIVERS, Special to the Daily News

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Mosquito season has arrived in full force in the Naples area. But, like our weather, it has not been a normal mosquito season.

Salt marsh mosquitoes began arriving sporadically as early as January in the Marco Island and Isle of Capri areas. During May things picked up a bit and presented a more normal salt marsh mosquito picture

The difference in this year's mosquito season is the early arrival of high populations of freshwater mosquitoes. The heavy, atypical rains this year have advanced the freshwater mosquito season by several months, producing high mosquito populations in the Golden Gate Estates and other areas prone to flooding.

One species of freshwater mosquito, *Culex nigripalpus*, is responsible for the transmission of West Nile virus and Saint Louis encephalitis to humans. In order to protect residents from these diseases, the Collier Mosquito Control District (CMCD) is working seven days a week to keep the population of this mosquito at levels that should minimize the potential for disease transmission. In addition, CMCD looks for the presence of West Nile Virus in mosquito samples and the Collier County Health Department operates five sentinel chicken flocks to monitor its transmission.

While the efforts of the CMCD and the Health Department greatly reduce the risk of becoming infected with a mosquito-borne disease, there are no guarantees that people will not be bitten by an infected mosquito. The ultimate protection against infection with a mosquito-borne disease rests with the individual. Practicing the "Five D's" (see side box) will greatly reduce an individual's risk of becoming infected with West Nile Virus or St. Louis Encephalitis.

This year, in addition to DEET, the CDC is recommending repellents containing Picaridin and Oil of Lemon-Eucalyptus to protect against mosquitoes. Products containing these new active ingredients have been shown to effectively repel mosquitoes. However, DEET is still the best repellent in that it provides protection longer than the other products. Whichever product is to be used, it should always be applied in accordance with the label.

Residents concerned with protecting themselves from mosquitoes frequently call the CMCD with questions about all of the products on the market claiming to eliminate mosquitoes from people's property. Essentially, CMCD tells people that, while some of the trap-style devices do catch a lot of mosquitoes, there have been no published, scientific studies to support the marketing claims made by the vendors. Neither the American Mosquito Control Association (AMCA) nor the CMCD endorse the use of these products.

The latest commercial mosquito control product on the market is the misting system. This is essentially a sprinkler system installed around and/or in a yard that emits a fine mist of insecticide at predetermined intervals. Some of the systems even have a button that the homeowner can push to spray insecticide on demand. Again, neither the CMCD nor the AMCA endorse these systems for a number of reasons:

To control mosquitoes with an insecticide mist, as the CMCD does with its aircraft, a number of environmental and mechanical factors have to interact favorably.

First and foremost, before any insecticide is applied for the control of mosquitoes, there should actually be mosquitoes present in the area to be treated. The CMCD takes care of this with an extensive system of light traps and human landing counts to measure mosquito populations. Mist systems that operate on a time clock make applications without regard to the presence or absence of mosquitoes. If no mosquitoes are present when the system sprays, the homeowner is wasting money and unnecessarily putting insecticide into the environment.

Mechanically, the droplets produced by the misting system must be small enough to impact the mosquito and still carry enough insecticide to kill the mosquito. Droplets that are too large will not hit the mosquito, but will fall to the ground or foliage where it might be contacted by non-target organisms. Neither of these situations is desirable.

Even if mosquitoes are present in a homeowner's yard, simply having the system spray insecticide does not insure that the mosquitoes will be killed. For this system, just like the CMCD's aerial applications, to kill mosquitoes, the mosquitoes must fly around in the spray to come into contact with the droplets. Mosquitoes resting under leaves, around the roots of trees and shrubs, or in thick grass are protected from the mist and will not be killed. Applications that are controlled by a clock or made on the whim of the homeowner may be a waste of insecticide and money if improperly timed.

STAY 'SKEETO-SAFE'

Follow the "Five D's" will to reduce the risk of West Nile Virus or St. Louis Encephalitis:

Dusk and Dawn - avoid outdoor activities during these times when mosquitoes are most active.

Dress - wear light colored clothing with long pants, long sleeved shirts, shoes and socks.

DEET - use a repellent containing DEET or another of the approved repellents discussed below.

Drain - empty containers such as flower pots, tires, wading pools, rain gutters, and buckets.

Using a time clock to make insecticide applications also means that the weather conditions necessary for good control may seldom be met. Applying insecticide while a hurricane roars up the coast, for example, would be a total waste of money, but the time clock wouldn't know that.

The primary insecticide used by several of these systems is pyrethrin (or pyrethrum). This product does have a low level of toxicity for mammals. However, this product is irritating to the eyes and nose. Chances are that anyone getting a snoot full of material when the time clock says "spray" will quickly have watery eyes and a runny nose. Not a pleasant outcome for a walk through the yard.

Before investing in expensive, high-tech mosquito control products, residents should consider:

Where they live (on the edge of the Everglades and the 10,000 Islands, both prime mosquito habitat).

Whether the product has published, scientific studies supporting the marketing claims made for it (articles in scientific journals, not anecdotal comments).

Whether the product is really safe for people, pets and the environment. Ask for copies of the EPA pesticide label for the insecticide that will be used. If you aren't comfortable with any of the answers you get, it is probably a good idea to follow the 5 D's, still the best protection against bites in mosquito-plagued Naples.

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