

# MOSQUITO AND MALARIA



Malaria is transmitted by the female Anopheles mosquitoes, and more than 60 species have been incriminated in the transmission of infection (there are about 430 species of Anopheles and about 3500 species of mosquito's altogether).

Some species are more significant than others as vectors because of variations in susceptibility to the parasite or the propensity of the mosquito to bite humans and to enter houses when looking for a blood meal. *Anopheles gambiae sensu lato* is the vector of most significance in Africa.

Both male and female mosquitoes feed on nectar and damaged fruit. Only female mosquitoes feed on animal blood to provide proteins for their eggs. The adult mosquito survives for between one week and one month.

Females lay their eggs in batches of 70-100 on the surface of water at night. The type of water used for egg laying is indicative of the mosquito species and includes irrigation channels, pools of water in tree trunks, and sewage effluent.

In tropical temperatures the eggs hatch after two to three days.

The larvae lie just below the surface of the water and feed on algae, and after 7-14 days turn into pupae during a five-minute process. The pupa is "comma-shaped" and is the least active stage of the Anopheles lifecycle. After two to four days the pupa metamorphoses into an adult mosquito. The adults emerge during late evening and are able to fly within minutes.

## ANOPHELES MOSQUITO

Mosquitoes usually mate in flight and the male is attracted to the female by the tone of her beating wing. The male Mosquitos antennae act as sound receptors to the tone.

Once mating has taken place the female mosquito searches for a blood meal. Following sensory cues such as the host odour, carbon dioxide and convection currents she seeks out a resting place which may be indoors or outdoors depending on the species.

When the blood meal has been found and digested, the ovaries develop and the mature eggs are laid at night.

## BIOLOGICAL SOLUTION

Historically the most effective way to wipe out or control malaria was through the use of DDT with its environmental damaging consequences and unhealthy side effects. DDT was sprayed over large areas covering mostly water refuges used by mosquito and was highly effective. Regrettably it poisoned many other creatures and living organisms including humans.

The lesson learned was that it was important to make an uncomfortable environment for the mosquito without damaging its surroundings or affecting anything or anyone else. If the female mosquito cannot find a suitable place to lay eggs, it will normally not lay eggs.

If eggs are laid, the larvae have to eat and they thrive on algae in order to survive. By removing those algae, the larvae starve to death. That is the real key to eliminating and control mosquito infestation.

## MOZZI-LOGY *(Please propose a better name if possible)*

MOZZI-LOGY is the product developed through 40 years of research by a group of scientists across four continents. It consists of a group of totally natural bacteria that compete for food and reproduction in the natural world. It is safe, very aggressive and works really fast.

Once MOZZI-LOGY is released into the environment, it searches for food and competes directly with the nutrients required by larvae for its survival. Once sprayed in the garden around a home, school or park, it will create a no go area for mosquito, either to lay eggs

## ANOPHELES MOSQUITO

or take a rest. The product is harmless to all other living organisms as it is an integral part of nature's balance.

Unlike zappers, chemical products or traps, MOZZI-LOGY only targets mosquitos.

This natural competition is focused on the mosquito's food requirements and its ability to breed in clear and polluted waters where food is found. All plants, invertebrates, fish, frogs and other bugs are not affected in any way. Regrettably MOZZI-LOGY will also die once the food runs out; therefore a monthly application is required.

## APPLICATION

*Use a large garden atomizer sprayer with a five liter capacity as this will facilitate an even spray and penetration in foliage and on grass. A hand held sprayer can also be used, however this is a decision one would take depending on the size of garden to be treated.*

Mix MOZZI-LOGY with water in a ratio of 1:200. In other words, mix 10 Liters of water with 50 grams of MOZZI-LOGY. Spray equally throughout the garden especially where water is present. Apply ideally in early evening and cover the foliage under bushes and plants. Apply once a week for four weeks. After these first four weekly applications, spray once a month during summer.

*In warm climates continue once a month all year long.*

## QUANTITIES

e.g.:

The average garden of a home on a 500 square meter plot could be covered with 5 liters of diluted formula per application as per above. Therefore, 25 grams of MOZZI-LOGY per 5 liters of application should be administered evenly.

To treat an average house all year round, 375 grams of MOZZI-LOGY will be required.

**First Month:** *Spray once a week with 25g of MOZZI-LOGY diluted in 5lt of water over the 500 square meter garden.*

**From months two to twelve:** *Spray once a month with 25g of MOZZI-LOGY diluted in 5lt of water over the 500 square meter garden.*

ANOPHELES MOSQUITO

## **SAFETY:**

MOZZI-LOGY is a 100% safe natural product that is totally harmless to humans, pet's plants and insects with the exception of Mosquito. Please refer to the Safety Data Sheet which is available on request.