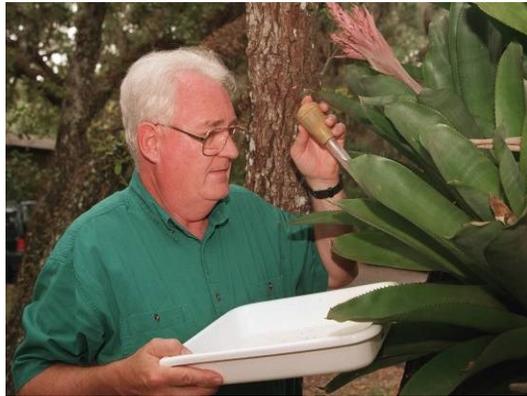

For more information see:

Frank, J. H. 1990, *Bromeliads and Mosquitoes*, Entomology Circular No. 331, Div. Plant Ind., Dept. Agriculture and Consumer Services.

Frank J. H. 1990, *Mosquito Production in Bromeliads in Florida*, Fl. Agric. Exp. Stn. Bul. 877

Frank, J.H. 1996. *Bromeliad-inhabiting mosquitoes in Florida*. Published on the WWW at <http://BromeliadBiota.ifas.ufl.edu/mosbrom.htm>

O'Meara, GF., Cutwa, MM., Evans, LF. Jr. 2003, *Bromeliad inhabiting mosquitoes in south Florida: native and exotic plants differ in species composition*. *J. Vector Ecology* Jun 28(1):37-46



Dr. George O'Meara sampling for mosquito larvae

(photo used with permission of IFAS Comm. & Info. Services)

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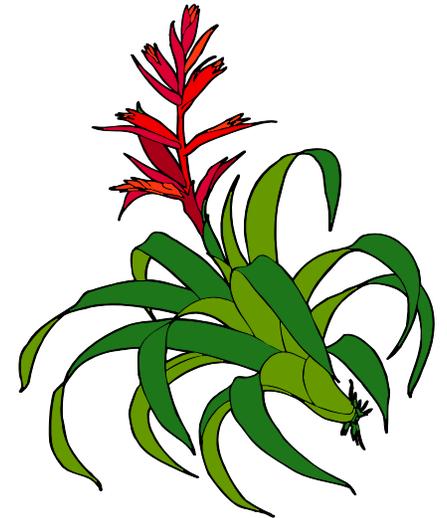
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Mosquitoes and Bromeliads

Lee County Mosquito Control District



Call or log on for questions or service requests

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Mosquitoes and Bromeliads

Q and A's

Q: Can bromeliads lead to problems with mosquitoes?

A: Yes, several species of mosquitoes do breed in tank bromeliads. *Aedes aegypti*, *Aedes albopictus*, *Wyeomyia vanduzeei*, *Wyeomyia michellii*, *Culex quinquefasciatus* and *Culex nigripalpus* are of most concern. All of these species are aggressive biters during the day and/or night and can be quite annoying. Some of them can transmit human diseases that can be found in Florida at this time. *Aedes aegypti* and *Aedes albopictus* are vectors for Dengue Fever while *Culex nigripalpus* and *Culex quinquefasciatus* are vectors for West Nile Virus and St. Louis Encephalitis.

Q: How do we know if our bromeliads are breeding mosquitoes?

A: You may be able to see them, but if not you can siphon out the water from the leaf axils using a turkey baster. Squirt the water into a cup and look for mosquito larvae .

Q: What can we do about keeping our bromeliads mosquito free?

A: If you notice adult mosquitoes you can lightly spray the area above the plants with an insect spray that is reg-

istered for flying mosquitoes.

To treat mosquito larvae in your plants you can either:

- Thoroughly flush your plants weekly to wash away any developing larvae from the tank portion of the plant.

Researcher J.H. Frank recommends treating the bromeliads with artificial fertilizers to compensate for the natural organic materials removed.

- Or treat the tank with a granular insecticide specifically registered for mosquito larvae.

Q: What granular insecticides are available that can be used to control mosquito larvae?

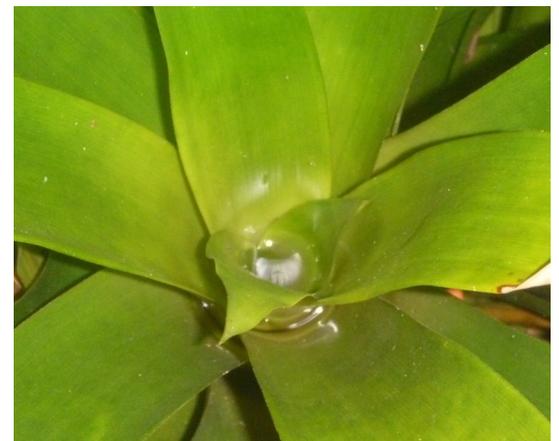
A: There are several types of products, made by a variety of manufacturers that can be used. These can be found in the garden section at gardening centers, hardware, or building supply stores or can be purchased on line.

- *Bacillus thuringiensis israelensis* or *Bti*, is a naturally occurring bacterial that is harmless to mammals but is quite capable of controlling mosquito larvae. The bacteria are coated onto ground corn cob granules which can be easily distributed over the bromeliad plants. Once the granule falls into the watery bromeliad tank, the bacteria are released from the granule, where they can be eaten by the mosquito larva. The bacteria damage the insect's stomach.
- Methoprene is an insect growth regulator that interferes with the insects

molting process and is sold under a variety of names . The exposed mosquito larvae are unable to reach maturity and reproduce. Methoprene is also nontoxic to mammals, and it is incorporated on several types of granules, usually either common sand or corn cob grits. Methoprene is also used in water cisterns and on pets for flea control .

Q: What else can be found in my bromeliad tanks?

A: There are a wide range of organisms that can be found in bromeliads that hold water (phytotelmata), from the microscopic to larger organisms including mosquitoes and other aquatic flies, aquatic beetles, frogs, damselflies, spiders, ants and some types of wood roaches.



Bromeliad tank, typical mosquito habitat

(photo by Shelly Redovan)