## What are Whiteflies?

Whiteflies are small, winged insects that belong to the Order Hemiptera which also includes aphids, scales, and mealybugs. These insects typically feed on the underside of leaves with their "needle-like" mouthparts. Whiteflies can seriously injure host plants by sucking nutrients from the plant causing wilting, yellowing, stunting, leaf drop, or even death. There are more than 75 different whiteflies reported in Florida.

**Not to Scale**
Rugose Spiraling Whitefly Photo by: H. Glenn, UF/IFAS

## Whitefly Trouble on Sanibel

Whiteflies are not new to Sanibel, but in recent years two different whitefly species have caused noticeable impacts to vegetation on the Island.

**Rugose Spiraling Whitefly:** In March 2009, a whitefly was collected in Miami-Dade County from a gumbo limbo. This was the first report of this insect in the United States, and it is believed to originate from Central America. Since the initial find, the insect has spread to at least 6 other southern Florida counties.

**Ficus Whitefly:** In 2007, another whitefly, new to this continent, was reported attacking ficus trees and hedges in Miami-Dade County. This Asian whitefly has now spread to 19 counties. Ficus whitefly may cause severe defoliation and branch dieback, but has never been reported on anything but ficus. It is most commonly found infesting the exotic weeping fig (*Ficus benjamina*).

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# Rugose Spiraling Whitefly

## A Guide for Homeowners

**January 2013**

## City of Sanibel

**Printed with Soy-Based Inks and Recycled Paper**

## Host Plants

The rugose spiraling whitefly has a very broad host range of both native and exotic plants, from palms to woody ornamentals and fruit trees.

The most common host plants on Sanibel include:

| | |
|---|---|
| gumbo limbo | Christmas tree palm |
| coconut palm | wax myrtle |
| black olive | Ficus (most species) |
| bird of paradise | alexander palm |

Rugose Spiraling Whitefly Spirals
Photo by: UF/IFAS

## What to Look For

Adult whiteflies, visible to the naked eye, congregate on the undersides of leaves to feed and reproduce. The female whitefly lays her eggs in a conspicuous **spiral pattern on the leaves**. Other noticeable symptoms of an infestation include an abundance of **white, waxy material covering the leaves** and excessive **sooty mold**. Like other similar insects, these whiteflies will produce "honeydew", a sugary substance, which causes the growth of sooty mold. In general, whitefly infestations can cause plant decline, defoliation and branch dieback. So far, however, the rugose spiraling whitefly appears to be a more of a mess maker, NOT a tree killer.

## Why is this Infestation so Bad?

When a new pest first arrives, its population often grows very rapidly and can be extremely damaging. In subsequent years, further outbreaks frequently show a steady decline in severity as natural controls help reduce the infestation. After several years, the impact is usually greatly reduced. Although some insecticide use may be necessary, it is very important to understand the importance of natural enemies and the need to focus on long-term, biologically based management. Protecting natural enemies is a critical component in the long-term control of this pest.

# Management in Your Sanibel Landscape

If you observe signs of a whitefly infestation, the City of Sanibel recommends the following:

1. **Make sure the insect is properly identified.**
2. **Decide if treatment is necessary.**

The City recommends only treating specimen trees or trees that are dripping sooty mold onto your home, pool, or driveway. Trees in more remote parts of your landscape should be left alone to minimize the impacts to natural enemies that will ultimately provide whitefly control.

## Recommended Treatment Options

- **Washing plants off with water** can be an effective tool to help manage whiteflies for small infestations or small plants.
- Using a **horticultural oil** or **insecticidal soap** can also help. These types of products are strictly contact treatments, so thorough coverage of the infested leaves is required. Typically, several applications are required 7-10 days apart.
- **A systemic insecticide** can be applied directly to the infested plant or to the soil. Soil applications include drenching the soil, spreading a granular formulation, or burying a pellet. Some products can also be applied as a basal trunk spray or injection into the trunk. Systemics may take several weeks to be effective for large trees but are VERY long lasting (9-12 months). The most common active ingredients are dinotefuran and imidacloprid.

*Avoid using broad spectrum or persistent insecticides. These products often kill a high proportion of predators and parasites, particularly when applied as a foliar spray.*

## Choosing a Contractor

- Visit www.mysanibel.com (Natural Resources page) for a list of licensed contractors on Sanibel.
- Research for competitive pricing. A minimum of 3 quotes is recommended.
- A good quote will include:
  Number of trees/shrubs to be treated, chemicals and methods to be used, number of treatments, guarantees (if any)

## Frequently Asked Questions

**Will my infested tree die?** In most cases, the rugose spiraling whitefly will not kill otherwise healthy, mature trees and palms. This whitefly *does not* cause the sudden leaf drop associated with the ficus whitefly.

**Do I need to prune or remove my tree?** No. Pruning an infested tree may actually result in more damage and removing a tree will cost more than treatment.

**I treated my trees, but the sooty mold hasn't gone away?** While you should achieve whitefly control with an insecticide treatment, it will take time for the white, waxy material and the sooty mold to be washed off by rain. It may be washed off physically for faster results.

**What if I treat my trees, but my neighbors do not?** If you treat trees on your property with a systemic insecticide, your trees will be protected regardless of whether your neighbors choose to treat their trees or not.

**Can I treat infested trees and shrubs myself?** There are several insecticide options for both professional and homeowner use. If you choose to treat infested plants yourself, **ALWAYS FOLLOW LABEL DIRECTIONS. The label is the law.**

## For More Information

Visit www.mysanibel.com (Natural Resources page), scan the QR code below, or contact Natural Resources at (239) 472-3700.

Visit the University of Florida-IFAS whitefly website at http://www.flwhitefly.org/ or contact the Lee County Extension Service at (239) 533-4327.

**Information in this brochure was adapted from several UF-IFAS publications, available at www.mysanibel.com (Natural Resources).**