

Cuban Laurel Thrips, *Gynaikothrips ficorum* (Marchal) (Insecta: Thysanoptera: Phlaeothripidae)¹

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Introduction

Watson (1923) recorded the Cuban laurel thrips in Florida as *Gynaikothrips uzeli* (Zimmerman 1900). Since Priesner (1939) found that *G. uzeli* and *G. ficorum* (Marchal 1908) are distinct species, most specialists accept *ficorum* as the name of the Cuban laurel thrips. Specimens supposedly collected in Florida in 1887 are in the U.S. National Museum. *G. ficorum* appears in the Entomological Society of America's common name list as the Cuban laurel thrips, and is the name used here.

Distribution

While *Gynaikothrips* is oriental, species in this genus have been described from Africa. *G. ficorum* is pantropical, appearing wherever *Ficus retusa* is planted. It is recorded from Algeria, Canary Islands, Colombia, Cuba, Dominican Republic, Guam, Taiwan, Ecuador, India, Java, Mexico, Nassau (Bahamas), Nicaragua, Israel, Palestine, Panama, Puerto Rico, Salvador, Thailand, Spain, Sicily, and the United States. It is recorded from California, Florida, Hawaii, and Texas.

Description

The life cycle takes two to four weeks, with three to five generations per year.

Egg: The egg is cylindrical with rounded ends, smooth, and is translucent white (North Carolina State University).

Larva: The first stage larva is a tiny, translucent white insect that is almost oval when looking at it from above. The second stage is also translucent white, but is more similar to the adult in size and shape, and the abdominal segments taper from the thorax. When viewed from above the second stage larva is shaped like an elongate diamond. Both the first and second stage larva have red eyes (North Carolina State University 2004). Older larvae are light yellow and the posterior tube becomes dark and is held pointing up.

Prepupa and Pupa: The prepupa are similar to the second stage larva except that the wing buds are externally visible. The pupa has longer wing buds and

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Figure 1. Several life stages of the Cuban laurel thrips, *Gynaikothrips ficorum* (Marchal). Black forms are adults, yellow forms are immatures and white, capsule-shaped forms are eggs. Credits: Photograph by: Paul M. Choate, University of Florida

the antennae are folded back over the head (North Carolina State University 2004).



Figure 2. Pupa of the Cuban laurel thrips, *Gynaikothrips ficorum* (Marchal). The pupae are easily distinguished from prepupae by their longer wing buds and the antennae folded back over the head. Credits: Photograph by: Paul M. Choate, University of Florida

Adult: The adult varies from about 2.6 mm to 3.6 mm in length and is dark yellowish-brown to black. With the exception of the legs and last abdominal segment, dorsal striations are shown on the adult and enlarged head insert. Breeding is continuous. Although the adult moves or fly rapidly when disturbed, it remain on or close to the leaves most of the time. They are also active flyers on hot days. Canizo (1945) gives detailed measurements of the body and antenna.



Figure 3. Adult Cuban laurel thrips, *Gynaikothrips ficorum* (Marchal). Notice the empty egg sac and shed exuviae of immatures. Credits: Photograph by: Paul M. Choate, University of Florida

A Key to eleven species of thrips is available at: <http://www.mrec.ifas.ufl.edu/Foliage/entomol/ncstate/thripkey.htm>.

Hosts

Ficus retusa L. is the preferred host. This plant has been referred to as *F. retusa* var. *nitida*. Other common hosts are *F. microcarpa*, viburnum, and citrus (Buss 2003). Wolcott (1953) says that most species of *Ficus* are largely or entirely immune to infestations, but when the thrips become abundant, they will feed on other hosts. Recorded hosts from Florida are *F. axillaris*, *F. aurea*, *F. benjamina*, *F. elastica*, *F. retusa*, *F. sp.*, *Codiaeum variegatum*, *Melicocca bijuga*, *Nicotiana tabacum*, *Viburnum suspensum*, and *Citrus* sp. Additional hosts from other areas are *Eucalyptus* in Cuba, *Gliricidia* from Puerto Rico, and *Calocarpum* sp. from Colombia.

Cuban laurel thrips are also an occasional pest of orchids (Nixon 1999).

Damage and Economic Importance

Adult thrips use their rasping-sucking mouthparts to feed on the tender, light-green leaves, causing sunken purplish red spots along the midrib. Tight curling of the leaf is caused by feeding from the developing colonies of immature thrips. The curled leaf becomes hard and tough, then gradually yellower and browner, and drops during windy, rainy weather.

Heavily infested leaves eventually become tough and brown or yellow. They eventually drop from the plant prematurely. Infested trees will not be killed, but the ornamental value of the plant is reduced markedly (North Carolina State University 2004). The thrips can be very annoying and often inadvertently bite when they drop onto people.



Figure 4. Damage on *Ficus* sp. due to feeding by Cuban laurel thrips, *Gynaikothrips ficorum* (Marchal). Credits: Photograph by: Paul M. Choate, University of Florida

In late 2003, an unusual and heavy movement of Cuban laurel thrips was reporting attacking *Ficus benjamina* nursery crops in southeastern Florida that caused growers serious concern (Shall 2003). G. B. Edwards (personal communication), of the Division of Plant Industry, later determined that this was an infestation of *G. uzeli*, a species now established in southern Florida.

However, there are at least three exotic *Ficus* spp. listed as potential weeds in Florida. As a result, the Cuban laurel thrips also assumes the role of a biological control agent which reduces the vigor of its host plant (Bennett 1995).

Management

Biological control: Dozier (1926) reported two species of Anthocoridae (minute pirate bugs), *Macrotracheliella laevis* Champion and

Cardiastethus rugicollis Champion, to be predacious on these thrips in Puerto Rico.



Figure 5. Larva of the minute pirate bug, *Orius insidiosus* (Say). Credits: Photograph by: James F. Price, University of Florida

Montandoniola moraguesi (Puton) was introduced into Hawaii (Funasaki 1966) and Bermuda (Bennett 1995) as a biological control agent. It was detected in Florida in 1990 as an immigrant species (Bennett 1995). Stock from Florida was shipped to Texas in 1992 as a biological control agent (Bennett 1995).



Figure 6. Adult and immature of *Montandoniola moraguesi* (Puton), a predator of the Cuban laurel thrips, *Gynaikothrips ficorum* (Marchal), shown here with an alternate host *Gynaikothrips uzeli* (Zimmerman 1900). Credits: L.J. Buss, University of Florida

Other biological controls include green lacewing larvae, bigeyed bugs, damsel bugs, ladybird beetles, predatory thrips, parasitic wasps, predatory mites, and *Verticillium* (a fungal pathogen) (Padrick 2004).

Cultural control: Replacing *F. retusa* with a resistant species of *Ficus* probably would be the best and most lasting control of this pest.

Because the Cuban laurel thrips only attacks the tender new foliage on small plants, it should be possible to prune out the new growth and eliminate the thrips population. Consequently, there is no suitable foliage for feeding and oviposition and the infestation should die out before new growth emerges (North Carolina State University 2004).

Chemical control: See the Insect Management Guide to Thrips on Ornamentals (<http://edis.ifas.ufl.edu/MG327>).

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