

## Thorn Bug, *Umbonia crassicornis* (Amyot and Serville) (Insecta: Hemiptera: Membracidae)<sup>1</sup>

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### Introduction

The thorn bug is an occasional pest of ornamentals and fruit trees in southern Florida. During heavy infestations, nymphs and adults form dense clusters around the twigs, branches and even small tree trunks. Some hosts which have been severely damaged include *Hibiscus* sp., powder-puff (*Calliandra* spp.), woman's tongue tree (*Albizia lebbek*), and *Acacia* spp. Young trees of jacaranda (*Jacaranda acutifolia*) and royal poinciana (*Delonix regia*) with a diameter of 1.5 to 2 inches have been killed by thorn bugs in the Tampa area. The trunks were so heavily infested that it was difficult to place a finger anywhere on the trunk without touching a specimen. Damage is caused by sucking the sap and by oviposition cuts. Butcher (1953) reported that certain trees, especially some cassias, suffered considerable loss of foliage, and that pithecellobiums (*Pithecellobium* spp.) suffered general and extensive terminal twig death. He also mentioned that thorn bug honey-dew secretions and accompanying sooty mold development caused a nuisance to home owners. Kuitert (1958) noted that heavy accumulations of

honey-dew sometimes occurred on parked automobiles. There are reports of barefooted children stepping on the spines of thorn bugs which drop out of trees. The wounds are slow healing and sometimes become infected.



**Figure 1.** Adult female thorn bug, *Umbonia crassicornis* (Amyot and Serville). Credits: Lyle J. Buss, University of Florida

1. This document is EENY-175 (originally published as DPI Entomology Circular 8), one of the Featured Creatures series of the Entomology and Nematology Department, Cooperative Extension Service, Institute of Food and Agricultural Sciences, University of Florida. Published: November 2000. Revised: August, 2004. This document is also available on Featured Creatures Website at <http://creatures.ifas.ufl.edu>. Please visit the EDIS Website at <http://edis.ifas.ufl.edu>. Additional information on these organisms, including many color photographs, is available at the Entomology and Nematology Department website at <http://entnemdept.ifas.ufl.edu/>.
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## Distribution

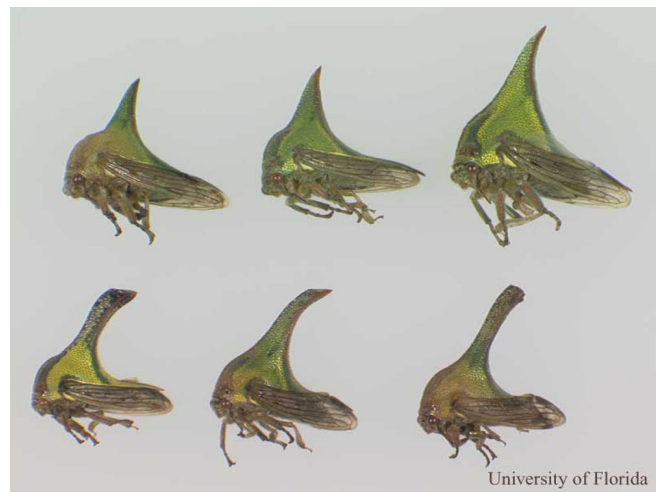
South and Central America, Mexico, and southern Florida. The Van Duzee (1917) records of *U. crassicornis* in Ohio and South Carolina are puzzling. At best, these would seem to be accidental introductions in which no natural populations were maintained. In Florida, no thorn bugs have been collected north of Winter Haven or south of Florida City according to Division of Plant Industry and University of Florida Agricultural Experiment Station records. However, the range of some of the hosts exceeds the range of the thorn bug. The original description in 1843 suggested that *U. crassicornis* was present in Florida at that time, but this species apparently did not become abundant until the last 15 years. Butcher wrote that his first specimens were obtained in April 1951. In a personal letter, Nov. 7, 1962, Dr. E.G. Kelsheimer said, "Our first experience with the thorn bug was in 1948 at Delray Beach where it was thriving on *Pithecellobium* sp. At that time it was unknown on the west coast, but the next time it was reported to us from Fort Myers where it apparently came in on nursery stock. From Fort Myers it gradually worked its way up to Bradenton."

## Identification

Four species of *Umbonia* are present in the U.S., but they are only found in the subtropical regions (Arnett 2000). The most common is *U. crassicornis*.

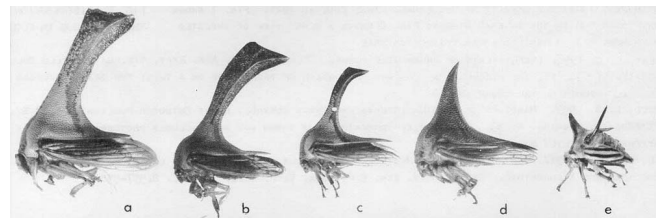
The thorn bug is a variable species as to size, color and structure, particularly the pronotal horn of males. Typically, the adult is about 0.5 inch in length and is green or yellow with reddish lines and brownish markings. Other treehoppers sometimes mistaken for the thorn bug in Florida are the varieties *Quadrivittata* (Say) and *Sagittata* (Germar) of *Platycotis vittata* (Fabricius). These varieties have the pronotal horn, but other varieties of *P. vittata* do not (Cook 1955).

The horned specimens exhibit a low, forward-projecting anterior pronotal process as opposed to either the tall, essentially perpendicular horn of the female thorn bug or the high receiving horn of the male. The humeral processes of the thorn bug are larger than those of *P. vittata*. Then, too, *P. vittata* lives primarily on oak (*Quercus* spp.) in



**Figure 2.** Adults of the thorn bug, *Umbonia crassicornis* (Amyot and Serville), showing variation in the species. Females are above, males are below. Credits: Lyle J.Buss, University of Florida

Florida, whereas DPI has no reports of the thorn bug on oak.



**Figure 3.** Adults and nymph of the thorn bug, *Umbonia crassicornis* (Amyot and Serville). Males, A-C; Female - D; Nymph - E. Credits: Division of Plant Industry

## Biology

Females lay their eggs in the tender bark of twigs and the eggs hatch about 20 days later. The female actively tends her brood or colony, which can number from 15 to 50 individuals. Young nymphs have three horns instead of the one seen on the adults. While four generations occur per year, females lay only a single clutch of eggs. (Johnson and Lyon 1994).

The species has a chemical communication that aids in the defense of the young. This chemical passes between the parent and nymphs. Potential predators reject these insects as prey due to a bad taste resulting from chemicals passing into the exoskeleton from glands (Johnson and Lyon 1994).

## Hosts

In addition to the above species, immatures and adults have been found on wild tamarind (*Lysiloma bahamensis*), tamarind (*Tamarindus indica*), *Casuarina* sp., *Crotalaria* sp., rayado bundleflower (*Desmanthus virgatus*), bottle brush (*Callistemon* sp.), Jerusalem thorn (*Parkinsonia aculeata*), dwarf date palm (*Phoenix roebeleni*), and from Steiner traps placed in a variety of trees. Adults have been reported on *Citrus* spp., *Bidens pilosa*, bagpod (*Sesbania vesicaria*) or (*Glottidium vesicarium*), avocado fruit (*Persea americana*), holly (*Ilex* sp.), lychee (*Litchi chinensis*), *Caesalpinia* sp., and *Mimosa* sp.

## Seasonal Distribution

Adults and nymphs can be found all year. Reports of heavy infestations have been received in all seasons, but probably more have come in during the cooler months. There is a consensus that most thorn bug populations in Florida have been reduced in the early 1960's, even in the Miami area. This contrasts sharply with the heavy infestations of the mid 1950's. The severe winter of 1957/58 appears involved in this reduction, and cyclic phenomena also may play a part. Butcher (1953) mentioned that parasites and predators of the thorn bug were conspicuous by their absence.

## Management

Due perhaps to the sporadic nature of the thorn bug, experimental work on the control of this pest is very limited.

See Insect Management on Landscape Plants (<http://edis.ifas.ufl.edu/IG013>).

## Selected References

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