

# Diaprepes Root Weevil

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*Diaprepes abbreviatus*  
West Indies Sugarcane Rootstock Borer

## Distribution of Diaprepes Root Weevil

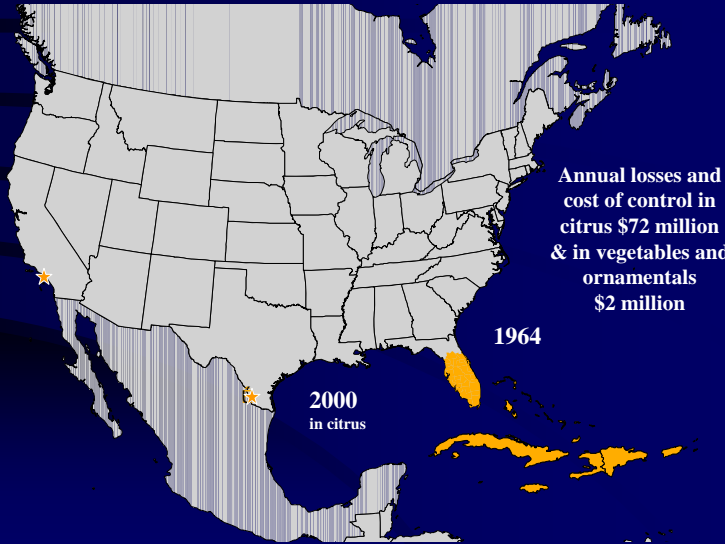
### Periodic CA Introductions Since 1974

2001  
Sacramento  
Placer

2003  
San Bernardino

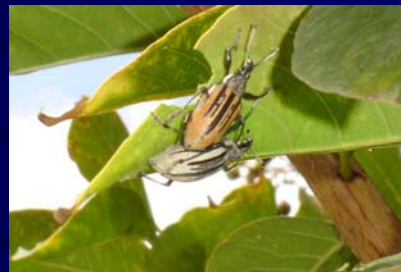
2005  
Orange  
Los Angeles

2006  
San Diego



## Diaprepes Root Weevil – Life Cycle

- Adults emerge after a rainfall or irrigation event
- Most active at dawn and dusk
- Females live about 147 days, and males, about 135 days



## Oviposition and Egg Stage



- Females deposit eggs in clusters of 30-260 eggs.
- Each female may oviposit a maximum of 5,000 eggs.



## Diaprepes Eggs



Eggs between leaves



Eggs hatch in 7 – 10 days.

## Diaprepes Larvae

- Newly emerged larvae burrow into the soil in search of roots or below-ground plant parts.
- Completes 10–11 instars in 5–15 months



## Diaprepes Pupae

- Pupate in a soil chamber
- Pupal stage lasts from 15-30 days
- Time from egg to adult 5 – 18 months



## Diaprepes Host Range

- >293 host plant species in 59 plant families associated with Diaprepes root weevil



## Host Range – Agricultural Crops

- Possible hosts include citrus, avocado, mango, pear, sweet potato, sapodilla, cotton, etc.



## Host Range – Ornamental Plants

- Possible hosts include crape myrtle, dracena, pigmy date palm, coral tree, camphor, hibiscus, rose, jacaranda, privet, etc.



## Adult Damage



Leaf notching and frass pellets



## Adult Damage



Occasional fruit feeding

## Larval Damage



Damage on below-ground plant parts



Damage to roots

## Larval Damage



Effects of larval feeding

## Biological Control Options



*Heterorhabditis indica* and *Steinernema riobrave*  
nematodes



## Biological Control Options



*Beauveria bassiana*

## Biological Control Options



*Aprostocetus vaquitarum* – ectoparasitoid of *Diaprepes* eggs. Released in 2001 and 2002 in southern Florida. By 2004, this parasitoid was responsible for 78-91% of the mortality of *Diaprepes* egg masses in south Florida.

## Diaprepes in California

- One Diaprepes adult was found in a gypsy moth trap in Newport Beach in September 2005
- In October 2005, a homeowner in Long Beach called in a report of Diaprepes root weevil.
- In May 2006, Diaprepes was reported to be in La Jolla.
- Currently, Diaprepes can be found at 3 sites in Orange County, 1 site in Los Angeles County, and 9 sites in San Diego County.

## Locations in California



Orange and Los Angeles Cos.



San Diego Co.

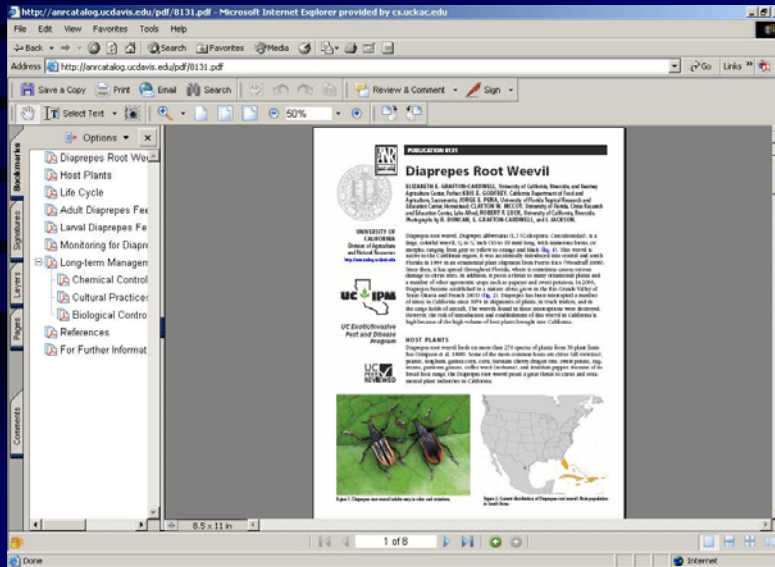
## Treatments for Diaprepes

- Los Angeles County – Treatments began on September 11, 2006, and to date, 3 treatments have been applied to approximately 329 properties.
- Orange County – Treatments in Newport Beach began on September 11, 2006, and to date, 2 treatments have been applied to approximately 284 properties.
- Orange County – Treatments to Newport Beach west and Yorba Linda began on October 16, 2006.
- San Diego County – Treatments began between September 11 and October 16, 2006, depending location. Some sites have received 2 treatments.

## Future of Diaprepes Eradication Efforts

- Treatments at all sites will continue through early November 2006. Most sites will be treated at least twice during this time.
- Extensive monitoring of the adult and egg populations will be conducted to determine the effectiveness of the treatments.
- CDFA has requested an additional \$17,000,000 for eradication efforts. If funded, this money would be available July 2007.

The Diaprepes Root Weevil brochure is available for free on the web:  
<http://anrcatalog.ucdavis.edu/pdf/8131.pdf>



## What you can do to help

If you think you have seen this weevil or you collect it on your property, please call the CDFA Pest Hotline at 800-491-1899.

