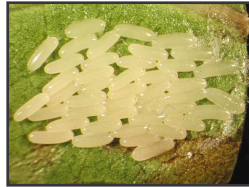


## Diaprepes Root Weevil (*Diaprepes abbreviatus*)

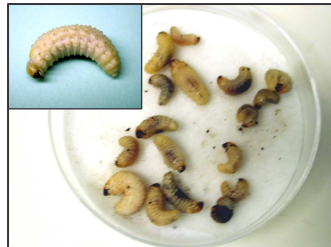
**Introduced:** 1964 (Orange County);  
Native to the Caribbean.

**Current Infestation:** Twenty-two counties in south and central Florida are infested with Diaprepes root weevil.

**Description/Biology:** This weevil is also sometimes called Apopka weevil and sugarcane rootstalk borer. The life cycle of Diaprepes root weevil is approximately one year. Eggs are laid on foliage in clusters between two leaves which are cemented together.



Larvae hatch from the eggs and fall to the ground where they burrow into the soil to feed on plant roots. The larvae are white, legless, and ultimately become about  $\frac{3}{4}$  inch (1.9 cm) long. The larvae pupate and then become adults in the soil.



Adults vary from  $\frac{1}{2}$  to  $\frac{3}{4}$  inch (1-2 cm) long and are mostly black except for red-orange and/or yellow wing coverings (elytra) with black longitudinal stripes. Adults are easily seen and frequently found as mating pairs.



**Seasonality:** There are overlapping generations so all stages of this pest can be found throughout the year. There are two peak adult emergence periods which usually coincide with the rainy season (May-June and August-September).

**Hosts:** More than 270 different host plants including citrus, sugarcane, vegetables, woody ornamentals, subtropical and tropical fruits, and non-cultivated wild plants. In south Florida, buttonwood (*Conocarpus erectus*) seems to be a particular favorite adult food source.

**Importance:** Diaprepes root weevil is a serious pest of citrus and of numerous ornamentals grown in south Florida nurseries. It is a quarantine pest and nurseries in infested counties are required to follow particular insecticide treatments prior to shipping outside of the quarantine area. This pest is less of a problem in the landscape.

**Damage:** The adults feed along the margins of young leaves causing leaf notching typical of weevil feeding. On ornamental plants, this damage can be moderate to severe and cause losses in sales.



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The larvae feed on the roots and can cause severe damage or root girdling. Root damage can lead to reduced plant vigor or plant death. Since the roots are weakened, infested plants are more likely to be toppled in storms and are more prone to root diseases.

**Management:** Despite many years of research, this pest continues to be a very difficult problem for citrus and ornamental growers. Monitoring for adults can be done by visual inspection or by shaking plant branches over a tarp or open, inverted umbrella.

Homeowner and Professional — Not typically a problem.

Grower - Growers in infested areas should monitor and manage this pest in their nurseries. Insecticides for adult control include acephate (i.e. Orthene, Address), bifenthrin (Talstar), chlorpyrifos (i.e. DuraGuard) and others (see Commercial Foliage and Woody Ornamental Arthropod Pest Management [http://edis.ifas.ufl.edu/BODY\\_IG012](http://edis.ifas.ufl.edu/BODY_IG012)). Nurseries shipping plants outside infested areas are required to be under a compliance agreement which may require bare-rooting the plants and the application of foliar and soil insecticides.

Young larvae can be controlled with a soil application of bifenthrin (drench or



incorporated in the media) and/or entomopathogenic nematodes (Grubstake HI which contains *Heterorhabditis indica* or BioVector 355 which contains *Steinernema riobrave*). Older, larger larvae are very difficult to kill. Some research suggests that the combination of bifenthrin and entomopathogenic nematodes kills more larvae than either product alone in container production.

### Websites:

[http://edis.ifas.ufl.edu/TOPIC\\_Diaprepes\\_Root\\_Weevil](http://edis.ifas.ufl.edu/TOPIC_Diaprepes_Root_Weevil)

[http://creatures.ifas.ufl.edu/citrus/sugarcane\\_rootstock\\_borer\\_weevil.htm](http://creatures.ifas.ufl.edu/citrus/sugarcane_rootstock_borer_weevil.htm)

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