

A REVISION TO THE BIBLIOGRAPHY OF THE SUGARCANE  
ROOTSTALK BORER WEEVIL, *DIAPREPES ABBREVIATUS*  
(COLEOPTERA: CURCULIONIDAE)

FLORIDA *DIAPREPES* TASK FORCE, RESEARCH COMMITTEE<sup>1</sup>

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During the past 30 years, the West Indian sugarcane rootstock borer weevil, *Diaprepes abbreviatus* (L.), has spread from its original site of introduction near Apopka, FL to 15 counties throughout the citrus industry. This native pest of the Lesser Antilles of the Caribbean region is considered a major long-term threat to Florida agriculture. Nineteen species of *Diaprepes* are prevalent in nearby countries within the Caribbean region (Woodruff 1985), but Florida is currently the only state within the U.S.A. with the weevil. In addition, some species within the closely-related genus *Exophthalmus* are major pests of citrus and other agricultural crops in many Caribbean countries excluding Florida.

The biology of *D. abbreviatus* is typical of many curculionid weevils. The adults emerge from the soil, feed, and oviposit on a preferred host plant. As the eggs hatch, larvae fall to the soil surface where they burrow into soil to feed on the roots of the plant. After many months, the larvae pupate in the soil. The adults emerge after a few weeks, leave the soil again and start a life cycle that is variable, ranging from 8 to 24 months. The adults feed on the foliage of at least 41 plant species in Puerto Rico (Martorell 1945) whereas the larvae also appear to be polyphagous with a particular affinity to bore into the plant roots. Host plants such as sugarcane, yams, pineapple, and corn exhibit this type of injury. On the other hand, citrus appears to be a preferred host, but injury is characterized by the destruction of fibrous roots and the cortical layer of both lateral and crown roots.

About 50,000 acres of citrus in Florida have confirmed infestations of the weevil. Most of the infested acreage is exhibiting severe decline or is out of production. Within the last 4 years, *Diaprepes* has been detected in 7 new counties including more recent plantings in Collier, Hendry, and Glades counties completing its dispersal to all major citrus growing areas of the state. Adult weevils discovered in the Moore Haven area in an ornamental nursery in 1993 place the pest within the northwestern edge of the sugarcane growing area in Glades County. *D. abbreviatus* is also a serious threat to the foliage and ornamental plant industry of Florida. Currently, 94 commercial plant nurseries are known to be infested throughout Florida. Nurseries have strict quarantine regulations placed upon them when adult and/or larvae are detected on ornamental plants. Most seriously, recertification is virtually impossible since no effective methods are available to assure weevil eradication.

Because of the increased concern over the spread of *D. abbreviatus* and its devastating effect on the citrus tree in Florida during the past years, a grower-initiated Task Force was organized under the leadership of Mr. J. B. Pratt, Polk County citrus grower, and Ms. Connie Riehard of the Florida Department of Agriculture and Consumer Services. This 27 member Task Force has as primary objectives: 1) establishment of a grower awareness program within the citrus and ornamental industries to

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combat the spread of *Diaprepes* and 2) encourage both short- and long-term strategies for control of this pest through research and extension programs.

In view of the fact that *D. abbreviatus* is becoming an increasingly important economic pest in Florida, threatens agriculture in other states and current biological and chemical control methods are limited, the Task Force agreed to update the bibliography published by Beavers et al. 1979 to assist scientists in their pursuit of a solution to this problem. Bibliographic sources were generated by both federal and state scientists involved in weevil research through various library services and include technical reports, popular articles, etc. that may be non-referred, but important as a source of new ideas.

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