

Pest Alert

FDACS-P-01668

Florida Department of Agriculture and Consumer Services, Division of Plant Industry
Charles H. Bronson, Commissioner of Agriculture

***Duplachionaspis divergens* (Green) - A New Pest of Sugarcane and Other Grasses in Florida (Hemiptera: Diaspididae)**

Greg Hodges, Greg.Hodges@FreshFromFlorida.com, Taxonomic Entomologist, Florida Department of Agriculture & Consumer Services, Division of Plant Industry

INTRODUCTION: This armored scale was first recorded in Florida and the U.S. from specimens collected on a grass in Sanford (Seminole County), Florida on November 1, 2002 by Amanda Melco; however, a re-examination of specimens collected in Bradenton (Manatee County), Florida on *Miscanthus* sp. on September 6, 2000 by Mark Runnals is the earliest known record of this species occurring in Florida.

The origin for this scale is unknown, but is suspected to be either the Orient or the Palearctic Region where it occurs in the following countries: Algeria, Australia, China, Egypt, India, Japan, Sri Lanka, Taiwan and Thailand. Lastra and Gomez (1997) first reported its occurrence in the Western Hemisphere from collections made on sugarcane in Colombia in November, 1996; however, specimens collected by Fred D. Bennett in Venezuela on sugarcane confirmed its presence in the Western Hemisphere as early as April of 1991.

DESCRIPTION: *Duplachionaspis divergens* (Fig. 1) has a white, elongate (about 3.5x as long as wide) scale cover with light brown terminal exuvia. By flipping the scale cover off, one can observe the body of the adult female which is yellow in color, elongate (1.46 mm long and 0.64 mm wide) with 4-5 lateral lobes. There are few species of armored scales with elongate white covers occurring on grasses in Florida. Some of the scales that *D. divergens* does resemble are those in the genus *Haliaspis*. However, species of this genus are almost always associated with wetland grasses and are generally smaller in size (1.0 mm). Other elongate species can be found on bamboo, but are very small (less than 1.0 mm) and often thread-like in appearance. Other armored scale species found on grass hosts other than bamboo in Florida are oval to circular in shape and are usually found in the crown of the grass rather than on the leaves.

BIOLOGY: Little is known about the biology of this insect in Florida. Lastra and Gomez (1997) reported information on the life cycle of this scale on sugarcane in Colombia. In that study, females produced an average of 130 eggs with crawlers emerging about 8 days after egg deposition. This scale insect is known to produce multiple generations per year.

HOSTS: This species is only known to feed on grasses (Poaceae) and has been collected from the following plants in Florida: *Andropogon glomeratus* (Walt.) Britton *et al*, *Andropogon* sp., *Cymbopogon citrates* (DC.) Staph., *Dactyloctenium aegyptium* (L.) Willd. ex Asch. & Schweinf., *Digitaria* sp., *Eragrostis elliotii* S. Watson, *Eremochloa ophiuroides* (Munro) Hack., *Eustachys petraeae* (Sw.) Desv., *Hymenachne amplexicaulis* (Rudge) Nees, *Imperata cylindrical* (L.) Raeusch, *Miscanthus sinensis* Anderss., *Miscanthus* sp., *Panicum repens* L., *Paspalum blodgettii* Chapm., *Paspalum notatum* Flugge, *Pennisetum alopecuroides* L., *Rhynchospora* sp., *Saccharum officinarum* L., *Schizachyrium* sp., *Setaria* sp., *Spartina alterniflora* Loisel, *Stenotaphrum secundatum* (Walt.) Kuntze, *Tripsacum dactyloides* (L.) L., and *Tripsacum floridanum* Porter ex Vasey.

ECONOMIC IMPORTANCE: The overall economic significance of this scale insect is unknown Pruthi and Rao (1942) reported it as a minor pest of young sugarcane plants in India; therefore, it is a potential pest of sugarcane in Florida where approximately 450,000 acres are grown annually (Meagher 2003). This species has been found on and is a potential pest of St. Augustine grass (*Stenotaphrum secundatum*), an important lawn grass; bahia grass (*Paspalum*



Florida Department of Agriculture and Consumer Services
Adam H. Putnam, Commissioner

notatum), an important pasture grass; and saltmarsh cordgrass (*Spartina alterniflora*), an important marsh grass.

DISTRIBUTION: **Australasian:** Australia. **Nearctic:** USA: Florida. **Neotropical:** Colombia, Venezuela. **Oriental:** India, Sri Lanka, Taiwan, Thailand. **Palearctic:** Algeria, China, Egypt, Japan.

FLORIDA DISTRIBUTION: Alachua, Brevard, Broward, Clay, Collier, De Soto, Duval, Hendry, Hernando, Indian River, Lee, Manatee, Marion, Martin, Miami-Dade, Orange, Osceola, Palm Beach, Pinellas, Sarasota, Seminole, St. Lucie and Volusia counties.

REFERENCES:

- Lastra, L. A. and L. A. Gomez.** 1997. *Observaciones del ciclo de vida de la escama blanca, Duplachionaspis divergens (Green) (Homoptera: Diaspididae) y reconocimiento de enemigos naturales.* p. 41-51, in IV Congreso Colombiano de la Asociación de técnicos de la caña de azúcar. Cali, Colombia 24-26 de Sept. de 1997, 473 pp.
- Pruthi, H. S. and V. P. Rao.** 1942 . *Coccids attacking sugarcane in India.* Indian Journal of Entomology 4: 87-88.



Fig. 1. Adult female cover of *Duplachionaspis divergens*.
Photo credit: Avas Hamon, FDACS-DPI