

Cycad Aulacaspis Scale (*Aulacaspis yasumatsui*)

Introduced: 1996 (Miami-Dade County), native to Thailand.

Current Infestation: Forty-five Florida counties including all of south Florida.

Description/Biology: The cycad aulacaspis scale, also called cycad scale, Asian scale, Asian cycad scale, and sago scale, is an armored scale. Its appearance is similar to the magnolia white scale, another scale found on cycads and numerous other ornamental plants.

However, cycad aulacaspis scale is only found on cycads and in much higher concentrations.



The female armor is white, less than 1/16 inch long (1.2 to 1.6 mm), and may be pear or irregularly shaped. The male armor is white, very small about 1/4 inch long (0.5 to 0.6 mm) and elongate with parallel ridges (looks similar



to other male scales species). Male scales typically outnumber the females on infested plants.

Seasonality: The cycad aulacaspis scale is present year-round particularly in south Florida. Populations tend to increase as temperatures become warmer.

Hosts: In Florida, it has been observed on three families of cycads (Cycadaceae, Zamiaceae, and Stangeriaceae). *Cycas* species seems most preferred, particularly the commonly planted queen and king sago (*Cycas circinalis* and *Cycas revoluta*).



Importance: Cycad aulacaspis scale is a very serious pest because it can cause severe damage and will ultimately kill the host plant. Also, this pest is easily spread by the movement of crawlers in the wind to other cycads.

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Damage: Crawlers (newly hatched eggs) initially infest the trunk and base of the leaves. But the scale will also infest the cones, seeds, roots, and ultimately both surfaces of the



leaves. Initially you will see chlorotic spots on the leaves and the scales can be found on the underside of the leaves.

Damaged leaves eventually turn brown. Severely infested cycads will appear to be white because they are covered in scales.



Eventually, plant death occurs.

Management: It is important to monitor for crawlers in the spring and treat before populations build up.

Dead scales are persistent on the plant for several months. To determine if the scales are dead, scrape some off with your fingernail. If they are dry and powdery, the scales are dead. If slightly moist or goopy, the scales are alive.

Homeowner - 1) Wash the plant with a vigorous spray of water to clean off dead and live scales. 2) Apply a horticultural oil (Organocide, SunSpray oil, or Ultra-Fine oil) over the entire plant once a week for one month. 3) If plants are heavily infested, remove the leaves before treatment. Place removed leaves in a durable plastic bag and throw out with household trash.

Professional and Grower - Foliar insecticides and oils can be used, however, complete coverage and repeat applications are important and necessary.

Foliar: acephate, acetamiprid, dinotefuran, malathion, or pyriproxyfen. However, malathion and acephate are more likely to reduce natural enemy populations.

Soil: dinotefuran.

Always follow pesticide label directions.

Biological Control: Two natural enemies (a predaceous beetle, *Cybocephalus*

nipponicus, and a parasitic wasp, *Coccobius fulvus*) were



introduced to Florida in 1997/98. Both have become established in

many areas in southern Florida and contribute to the control of the scale. Neither one of these natural enemies provides complete control.

Websites:

http://creatures.ifas.ufl.edu/orn/palms/cycad_scale.htm

<http://edis.ifas.ufl.edu/IN253>

<http://edis.ifas.ufl.edu/IN474>

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August 2006