

## Croton Scale in South Florida *Phalacrocooccus howertoni*

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Adult females coat the petioles and twigs and resemble buds; the male scales are all over the undersides of the leaves. Photo: Doug Caldwell



Adult and yellow immature stages of this new scale insect on a croton twig. Photo: Lyle Buss, UF/IFAS

A new-to-science scale was first found on April 9, 2008 at a nursery in Marathon (Monroe County), Florida. The infested plants were crotons (*Codiaeum variegatum*). It turns out the specimens submitted to the Division of Plant Industry were found to be an unknown, that is, unknown anywhere to science, exotic soft scale insect. Subsequently, this scale has been found in Broward, Miami-Dade, Palm Beach, Lee and Collier counties.

Scott Krueger, DPI inspector, reported more than half of the nurseries and garden centers selling crotons commonly were infested with this new scale. Scott advises, "Look closely, especially if you see ants on the plants." Ants are attracted to the honeydew excretion of the scale. There are 72 known host plants from 34 plant families. (*Hodges and Hodgson. 2010. New Soft Scale in Florida Entomologist*)

The plants on this scale's menu include: Croton (*Codiaeum variegatum*), guava (*Psidium guajava*), gumbo-limbo (*Bursera simaruba*), lignum vitae

(*Guajacum sanctum*), mysore fig (*Ficus mysorensis*), strangler fig (*Ficus aurea*), mango (*Mangifera indica*), island marlberry (*Ardisia escallonooides*), firebush (*Hamelia patens*), Florida toadwood (*Cupania glabra*), wild coffee (*Psychotria nervosa*) and West Indian satinwood (*Zanthoxylum flavum*).

Adult females and late instars of this new exotic soft scale have a greenish yellow appearance with dark striations and are approximately 3.5 mm to 7.0 mm long by 2.0 mm wide. Immature males are smaller than the female scales and have a whitish-glassy appearance and tend to settle on the underside of leaves. Unlike other soft scales insects (such as green scale) this new scale doesn't tend to have as much black sooty mold developing on the plant. This mold grows on the excretion (termed "honeydew") of most soft scales, mealybugs, aphids and some other sucking insects. But, rains may wash the "honeydew" off and hence, less mold during the rainy season.



The croton scale also attacks firebush.

Photo: Stephen Brown

**What to Do:** There is little information on the biology of this new scale insect at this time, which makes these recommendations speculative. I recommend one soil-root rate drench dose of dinotefuran (Safari™) or imidacloprid (Merit™ for professionals) or Bayer Advanced™ Tree & Shrub Insect Control for homeowners. Merit may take 2 weeks to move into the above ground plant parts from the roots, so if a heavy population exists, apply a 1.5 to 2% solution of paraffinic horticultural mineral oil for immediate kill of smaller stages (but there is no residual kill with the horticultural oil, "What you hit is what you get" and it is ineffective against the large females). Make sure plants are in a well ventilated area if applying the properly labelled, horticultural mineral oil (it will evaporate faster). Injury or discoloration may occur if the oil doesn't evaporate. Or, instead of the horticultural mineral oil, use the foliar rate of Merit (0.5 oz/100 gallons) to get quicker results, but expect about only 2 weeks residual. Pesticide formulations containing acephate (Orthene) may also help. I do not recommend using soil drench systemics on firebush

because it is a nectar plant for bees and butterflies. About the only recourse is repeated applications of the horticultural mineral oil for scale control on nectar plants.

Look for lady beetles as potential natural enemies. Some of these lady beetle larvae have a lot of waxy filaments and resemble mealybugs. 🐞

For more details see on this new scale, see:

<http://www.freshfromflorida.com/pi/pest-alerts/coccoidea-coccidae.html>

Download this PDF from Dr. Catharine Mannion University of Florida, IFAS:

<http://trec.ifas.ufl.edu/mannion/pdfs/Croton%20Scale%20Update%20March%202009.pdf>

See our video on this at: <http://youtu.be/yymmgl9SioNY>



The croton scale on gumbo-limbo. This black sooty mold grows on the excretion (termed "honeydew") of most soft scales.

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