



The male scales tend to settle on the undersides of the leaves(left) and look very different from the females. (Photo credit: Stephen Brown, UF/IFAS Lee Co. Extension). Adult and yellow immature stages(right) of this new scale insect on a croton twig. (Photo credit: Lyle Buss, UF/IFAS)

A New Exotic Soft Scale Insect on Croton in South Florida

Doug Caldwell, Commercial Landscape Horticulture

The Florida Department of Agriculture and Consumer Services, Division of Plant Industry has reported another new landscape plant pest! We have had a plethora of new pests in our landscapes over the last two years and some: red palm mite; ficus whitefly and cabbage palm lethal yellow disease are only two to three counties away.

This new-to-science scale was first found on April 9, 2008 at a nursery in Marathon (Monroe County), Florida. The host plant was croton (*Codiaeum variegatum*). Specimens submitted to the Division of Plant Industry were determined to be an unknown, but exotic soft scale insect. Subsequent collections of this exotic soft scale on croton have been made from Broward, Miami-Dade, Palm Beach, Lee counties and most recently Collier County.

Scott Krueger, DPI inspector reports more than half of the nurseries and garden centers selling crotons have this new scale. Scott advises, "Look closely, especially if you see ants on the plants. The list of host plants other than croton is increasing weekly."

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 escallonioides*), firebush (*Hamelia patens*), 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, perhaps the recent rains have been washing the "honeydew" off and hence, less mold during the rainy season.

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 Safari (dinotefuran) 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 hort 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, hort. mineral oil (it will evaporate faster). Injury or discoloration may occur if the oil doesn't evaporate. Or, instead of the hort. 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.

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.doacs.state.fl.us/pi/enpp/ento/coccoidea_coccidae.html . For pictures of some lady beetle larvae, see: <http://edis.ifas.ufl.edu/HS138> . As always, inspect plants closely before buying new plants!

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