

Sri Lanka Weevil  
(*Mylloceris undecimpustulatus*  
*undatus* Marshall)

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# Origin and introduction

- Native to Sri Lanka.
- Spread to India and Pakistan.
- First detected in the U.S. in Broward County in 2000.
- At present it has been found in Charlotte, Collier, Hendry, Lee, Martin, Miami-Dade, Orange, Palm Beach, Pinellas, Polk, Sarasota, and St. Lucie Counties.

# Basic biology

- Description – sometimes called Asian grey weevil and myllocerus weevil.
- Life cycle – stages of a related species
  - Egg – may lay 360 eggs over a 3 day period; they hatch in 3-5- days
  - Larval – feed on roots; 1-2 months
  - Pupal – in soil/leaf litter; 1 week
  - Adult - ~10 to 150 days
- Activity and number of generations is influenced by temperatures and access to host material.
  - Under lab conditions the life cycle completed under 2 months
  - More generations during warm temperatures

# Sri Lanka Weevil

- Similar in appearance to little leaf knotcher (*Artipus floridanus*) but...
- Body generally whitish-grey with dark mottling of the upper surface and yellowish head.
- The hind leg (femora) is spined.



Photo credit : C M Mannion

Note yellowish color on head.



Note notches on hind legs.



Note grayish mottling and yellowish head.

# Hosts

At least 103 host plants are known including native, ornamental, and fruit crop species.

- Fruit crops: akee, avocado, carambola, cashew, citrus spp., jaboticaba, longan, loquat, lychee, mamey sapote, mamoncillo, mango, papaya, muscadine grape, passion fruit spp., and Surinam cherry.
- Ornamentals: veitchia palm spp., areca palm, bottlebrush, buttonwood, satin leaf, crepe myrtle, earleaf acacia, ficus, Hong Kong orchid tree, live oak, mahoe, black olive, mahogany, orange jasmine, pigeon plum, plumbago, pygmy date palm, seagrape, strangler fig, woman's tongue, wild tamarind, etc.

# Damage

- Voracious foliar feeding, sometimes only the primary and secondary veins remain.
- New flush is particularly vulnerable.
- Tree decline and stunting due to continued loss of canopy due to adult leaf feeding.
- Larva assumed to feed on roots although this has not been verified for lychee, longan, and mango trees.



Adult feeding on lychee leaves.  
Photo credit: JE Peña, TREC



Adult feeding on longan leaves.  
Photo credit: GS Nuessly, EREC

# Current research

## *Development of Management Strategies for Integrated Control of Sri Lanka Weevil in Tropical Fruits and Ornamental Plants*

- Dr. Gregg S. Nuessly, Entomologist, EREC
- Dr. Catharine Mannion, Entomologist, TREC
- Dr. Nico Franz, Entomologist, UPR
- Dr. Pablo Morales, Horticulturist, UPR
- Dr. Jorge Peña, TF Entomologist, TREC
- Dr. Jonathan Crane, Horticulturist, TREC
- Dr. David Sui, Nematologist/Horticulturist, Palm Beach Co. Extn. Service, UF-IFAS
- Mr. Bill Schall, Horticulturist, Palm Beach Co. Extn. Service, UF-IFAS
- Mr. Jason Osborne, Horticulturist, Miami-Dade Co. Extn. Service, UF-IFAS
- Mr. Henry Mayer, Horticulturist, Miami-Dade Co. Extn. Service, UF-IFAS



# Goals of the research

The overall objective of this proposed work is to develop the knowledge required to produce effective and economic short- and long-term solutions for management of the Sri Lanka weevil (SLW). Specific objectives are as follows:

- Determine the field biology for all developmental stages of SLW. Evaluate trapping methodologies for early.
- Determine the short-term effects of leaf feeding on plant growth and reproduction of tropical fruits.
- Identify key plants for use in surveys and for long-term protection.
- Identify and evaluate commercially available natural enemies, chemical and biological pesticides, and repellents for management of SLW (Florida) and closely related root weevils (Puerto Rico).
- Produce research and extension publications in English and Spanish on the biology and management of SLW.

# Current management strategies

New sites are infested by use of infested plant material (roots and/or shoots) and the adults fly.

- Very little in the way of bio-control or cultural control available for groves at this time.
- Destruction of abandoned groves and clean-up of vacant lots with host plants.
- Frequent disking of the grove to reduce population of larvae and pupae. May not be practical nor desirable because of root destruction.

# Current management strategies

- Chemical control of adults is difficult due to their ability to hide and fly. Adults from 1 area may fly to a new area – re-infestation is a rapid and common occurrence.
- Chemical control of eggs, larvae and pupae difficult because of soil habitat.
- Adult control on citrus – numerous products available including Danitol, Sevin, Imadan, Kyrocide, Micromite, and Orthene.
- Lychee, longan, mango, papaya, passion fruit, and mamey sapote – nothing registered for bearing trees. Talstar is registered for non-bearing plants of these species.

# More information

- EDIS - Univ. of Fla.-IFAS at <http://edis.ifas.ufl.edu>
- FDACS-DPI at <http://www.doacs.state.fl.us/pi/enpp/ento/weevil-pest-alert.html> and <http://www.doacs.state.fl.us/pi/enpp/ento/entcirc/ent412.pdf>
- Miami-Dade Co. Coop. Extn. at <http://miami-dade.ifas.ufl.edu/>
- Univ. of Fla.-IFAS, Tropical Research and Education Center at <http://trec.ifas.ufl.edu>