

FIRST DETECTOR NETWORK NEWS



NPDN
National Plant Diagnostic Network



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Cotton seed bug declared eradicated in Florida

Stephanie D. Stocks, Department of Entomology and Nematology, University of Florida

The cotton seed bug (*Oxycarenus hyalinipennis*) was detected in 2010 on Stock Island and Fort Zachary Taylor State Park in Monroe County, Florida (both of these locations are found in the Florida Keys). It was targeted for immediate eradication at the time of detection and was officially declared eradicated in March 2014.

This pest is found worldwide in tropical, subtropical, and warm temperate environments except in North America.

It is an important pest of cotton and other crops that belong to the Malvaceae family (mallow family). It is a seed feeder of more than 35 reported host plants in this family, especially cotton (*Gossypium* spp.), hibiscus (*Hibiscus* spp.) and okra (*Abelmoschus* spp) with the preferred reproductive host appearing to be cotton.

Adults are generally 3.8 to 4.3mm in length. They are brown to black in color depending on the continental origin of the populations (Caribbean populations are brown while African populations are black) and have translucent white wings.

Nymphs go through 5 instars and the life cycle can be completed in as little as 3 weeks under optimal conditions.

In the Florida Keys, cotton plants can and do grow wild in the natural areas producing bolls year round. High density infestations can be very obvious. The bolls that are infested look like they have tiny black or brown bugs running through the cotton.

As this pest is found in the Caribbean, its (re)introduction through Florida could potentially cause significant damage to the

continued on next page



Images courtesy of Julieta Brambila, USDA-APHIS, bugwood.org, #5426962 and Karolynne Griffiths, FDACS-DPI.

In This Edition:

- Cotton seed bug declared eradicated in Florida
- New mobile apps available for First Detectors
- Lucid has released new updated identification tools
- New taxonomic training videos have been released
- Update on Fruit Flies in the United States

commercial cotton industry should it move into the Southeastern United States. In fact, it has been intercepted 606 times at U.S. ports between 1984 and 2013 so there is a good possibility of it being reintroduced.

The Florida Department of Agriculture and

Consumer Services ask that First Detectors keep an eye out for this pest and to report any suspicious sightings. There is online training material available on the cotton seed bug on the [Florida First Detector website](#).

New mobile apps available for First Detectors

Stephanie D. Stocks, Department of Entomology and Nematology, University of Florida

There have been recent releases of mobile apps that First Detectors can use to help with field identification of economically important pests and pathogens.

The National Plant Diagnostic Network and its partner program Protect U.S. have developed apps that are available for download at no cost through both the iTunes App Store and the Google Play Store.

NPDN topics include:

- Citrus Pests (click [here](#) for iTunes, click [here](#) for android)
- Citrus Diseases (click [here](#) for iTunes, click [here](#) for android)

Protect U.S topics include:

- Citrus Diseases and Pests for Homeowners and Small Farm Producers (click [here](#) for iTunes, click [here](#) for android)

In addition, Lucid has announced the release of ten apps available for download at no cost through both the iTunes App Store and the Google Play Store.

Topics include:

- Citrus Pests Key (click [here](#) for iTunes, click [here](#) for android)
- Citrus Diseases Key (click [here](#) for iTunes, click [here](#) for android)
- Citrus ID Key (click [here](#) for iTunes, click [here](#) for android)
- Dried Botanicals Key (click [here](#) for iTunes, click [here](#) for android)
- Federal Noxious Weeds Key (click [here](#) for iTunes, click [here](#) for android)
- Palm Screening Aid Key (click [here](#) for iTunes, click [here](#) for android)
- Palm Symptoms Key (click [here](#) for iTunes, click [here](#) for android)
- Palm ID Key (click [here](#) for iTunes, click [here](#) for android)
- Terrestrial Mollusc Key (click [here](#) for iTunes, click [here](#) for android)
- TortAI Key (click [here](#) for iTunes, click [here](#) for android)

About NPDN:

The NPDN is a network of state and federal officials, land grant universities, and First Detectors whose mission is to detect, diagnose, and disseminate information regarding high consequence plant disease or pests. The NPDN was established in 2002 in response to a need for greater agricultural security.

Over the years, the NPDN has grown into an internationally respected consortium of plant diagnostic laboratories.

The five regions that make up the NPDN are the: [NEPDN](#), [SPDN](#), [NCPDN](#), [GPDN](#), and [WPDN](#).

Please feel free to browse the links to the various regions to get a better idea of what is going on in your part of the country.



Lucid has released new updated identification tools

Stephanie D. Stocks, Department of Entomology and Nematology, University of Florida

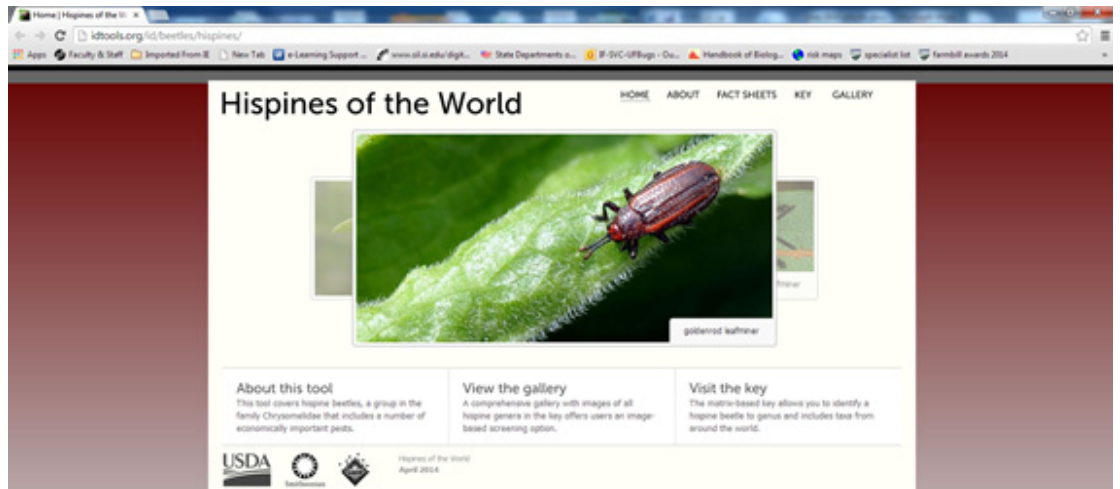
USDA Animal and Plant Health Inspection Service's Identification Technology Program (ITP) has released two new Lucid updates.

The first one is Hispines of the World which was originally released in 2012.

Hispines contain 195 genera, many of which

are considered pests of economic importance while others are used as biocontrol agents against weeds.

To access the latest version of this Lucid key, click [here](#).

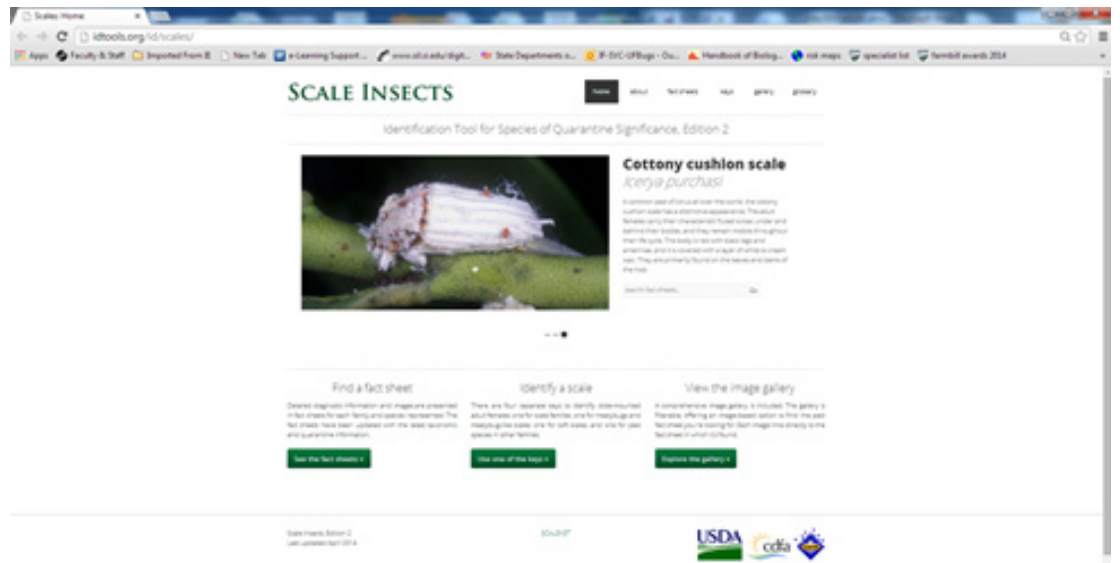


The second one is Scale Insects: Identification Tool for Species of Quarantine Significance which was originally released in 2007.

Scale insects are pests of major economic importance throughout the world. In the

U.S. alone, they cause billions of dollars to industry in both damage to plant crops and in control methods.

To access the latest version of this Lucid key, click [here](#).



New taxonomic training videos have been released

Stephanie D. Stocks, Department of Entomology and Nematology, University of Florida

USDA APHIS in partnership with NPDN has developed a series of taxonomic training videos that can be accessed at no charge through the [NPDN First Detector website](#).

The Advanced Taxonomic Training video series was produced as a component of a 2012 Farm Bill 10201 Cooperative Agreement entitled "Delivery of Taxonomic Training through Distance Education."

Mr. Joel Floyd, Domestic Diagnostics Coordinator for USDA-APHIS-PPQ was the overall federal leader for the project. Project coordination was provided by Dr. Amanda Hodges, DPM Director, University of Florida (UF); Dr. Alma Solis, former USDA-ARS-SEL Research Leader; Dr. Gary Miller, USDA-ARS-SEL Research Leader; and Dr. Greg Hodges, Bureau Chief for Entomology, Nematology, and Plant Pathology, Florida Department of Agriculture and Consumer Services, Division of Plant Industry (FDACS-DPI).

Onsite coordination was provided by UF Co-PIs Ms. Stephanie Stocks, Assistant-In, Extension Scientist and Dr. Stephen McLean, former UF Post-Doctoral Associate. Filming and editing was done by Stephen Thornton. Ms. Stocks also coordinated the post-production review of the final filmed videos.

The goal of the project was to provide engaging and interesting hands-on video tutorials for taxonomic groups that are important to USDA-APHIS-PPQ identifiers and state or university taxonomists. As a component of the project, two intensive video-filmed workshops were hosted at the University of Florida on Aphididae,

Aleyrodidae, and Coccoidea (May 2013) and Hemiptera: Auchenorrhyncha and Pentatomidea (August 2013).

The videos featured expert lectures and hands-on training by Dr. Ian Stocks, FDACS-DPI; Dr. Greg Evans, USDA-APHIS-PPQ; Mr. John Dooley, USDA-APHIS-PPQ; Dr. Gary Miller, USDA-ARS-SEL; Dr. Susan Halbert, FDACS-DPI; Dr. Charles Bartlett, University of Delaware; Dr. Joe Eger, Dow Agrosiences; and Dr. Stuart McKamey, USDA-ARS-SEL.

Included in the video series are introductions to the groups, key characteristics that identifiers need to be familiar with in order to work through the available keys, specific species that USDA APHIS is particularly concerned about coming into the U.S., and damage these insects can cause. Presenters also go through several identification keys step by step, pointing out the specific characteristics referenced in the key steps.

Two additional sets of advanced taxonomic training videos are scheduled for the upcoming year.

Thrips will be filmed in August 2014 and will feature expert training by Thomas Skarlinsky, USDA APHIS; Cheryle O'Donnell, USDA APHIS; and Joe Funderburk, University of Florida. These videos should be released by February 2015.

Mites will be filmed on January 2015 and will feature expert training by Ron Ochoa, USDA ARS SEL; Cal Welbourn, FDACS-DPI; and Eric McDonald, USDA APHIS. These videos should be released in June of 2015.

NAPPO Phytosanitary Alert System

The [North American Plant Protection Organization's \(NAPPO\) Phytosanitary Alert System](#) is featured in this newsletter every month. Remember that this a great resource to keep up to date on the latest pest detections and quarantine information. The website features both official reports and

unofficial alerts of pests for Canada, Mexico, and the United States.

They also have free subscriptions that are available for periodic email notifications of new postings on their website. Be sure to check it out regularly!

Update on Fruit Flies in the United States

Stephanie D. Stocks, Department of Entomology and Nematology, University of Florida

Various fruit fly species (Tephritidae) have been the target of regulatory activities lately.

In March 2014, APHIS established a quarantine area in the city of Los Angeles, California for Mediterranean fruit fly (*Ceratitis capitata*).

Four adult males were initially detected and with further inspection, 12 more adults and 4 larval sites were also discovered. As a result, a new quarantine area of 88 square miles was put into effect for this area.

APHIS is working with California Department of Food and Agriculture and the Agricultural Commissioner of Los Angeles County to survey, treat, and eradicate this pest.

Medflies are one of the world's most destructive fruit pests. Adults are 3.5 to 5mm in length, yellowish in color on the head and abdomen, dark on the thorax, and have dark markings on their wings. Their host list is extensive and includes citrus, mango, peach, apricots, guava, and sapote.

First Detectors in the Los Angeles area are asked to keep an eye out for this pest and report any suspicious sightings to the California Department of Food and Agriculture.



Image courtesy of Florida Division of Plant Industry Archive, Florida Department of Agriculture and Consumer Services, Bugwood.org, #5193028.

In January 2014, five adult Mexican fruit flies (*Anastrepha ludens*) were detected in residential areas of Weslaco, Texas (Hidalgo County) while a mated female was found in Willacy County.

Additional detections were found in Hidalgo County in March and April (including larvae).

As a result, these areas were placed under quarantine by APHIS in cooperation with Texas Department of Agriculture.

Mexican fruit flies are a particular pest of citrus and mango (though the host list encompasses many other fruits). Adults are 7 to 11mm long and yellowish-brown in color. There are pale yellow bands on otherwise clear wings.

First Detectors are encouraged to be aware of this pest and to report any suspicious sightings to the Texas Department of Agriculture.

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Image courtesy of Jeffrey W. Lotz, Florida Department of Agriculture and Consumer Services, Bugwood.org, #5193068.

In April 2014, the remaining quarantine areas in Orange County and Los Angeles County were removed from quarantine for Oriental fruit fly (*Bactrocera dorsalis*).

In August 2013, two male Oriental fruit flies were found in Los Angeles County and by September 2013, an additional 92 adults



Florida Division of Plant Industry Archive, Florida Department of Agriculture and Consumer Services, Bugwood.org, #5193078.

and 9 larvae were found in Orange County while 19 additional adults were found in Los Angeles County.

As a result, parts of these counties were placed under quarantine by APHIS working in conjunction with California Department of Food and Agriculture.

Oriental fruit flies also have a wide variety of hosts which include guava, mango, papaya, citrus, and avocado. The adults have a body length of 8mm with mostly clear wings.

Coloration can vary, but there are distinctive yellow and dark brown to black markings that are found on the thorax and a "T" shaped pattern on the abdomen.

Even though this pest has been declared eradicated, California has detected this pest many times in the past.

First Detectors in California area are asked to keep an eye out for this pest and report any suspicious sightings to the California Department of Food and Agriculture.

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Editors: Carrie L. Harmon and Stephanie D. Stocks.

To submit news items in future editions of the newsletter, contact: clharmon@ufl.edu or sstocks@ufl.edu.

You can include a short descriptive paragraph, links, and related images or documents – don't forget to include author and image credits though.



SPDN

Upcoming Meetings:

- If you would like your meeting listed in the newsletter, let us know.

First Detector Training Opportunities:

- July 16, 2014 - Invasive Plants First Detector Training will be held in Florence, WI - click [here](#) for more information.
- July 22, 2014 - Sentinel Plant Network First Detector Training will be held in Ames, IA - click [here](#) for more information.
- August 27, 2014 - Sentinel Plant Network First Detector Training will be held in Ames, IA - click [here](#) for more information.

- September 23, 2014 - Sentinel Plant Network First Detector Training will be held in Ames, IA - click [here](#) for more information.
- If you are hosting a First Detector Training Session, please post these on the NPDN First Detector Training website so that they can be listed [here](#).

Employment Opportunities:

- Please click [here](#) for more information.

Do you tweet?

- Click [here](#) for updates.