

## Help Slow the Spread of Asian Citrus Psyllid in California

**A**sian citrus psyllid (ACP) continues to spread and to be an ever-present concern in California. Because of this, we have updated information from the April 2015 issue of UC IPM's Retail IPM newsletter to share with your customers.

Until 2013, ACP was mostly found in Southern California, but has since been found in multiple locations in the Central Valley and has been detected as far north as the San Francisco Bay Area. The psyllid is well-established in coastal and inland Southern California and it is slowly establishing itself in Central and northern California. In the process, it is threatening California's commercial, nursery, and residential citrus.

ACP can transmit the bacterium causing an incurable and devastating citrus disease, huanglongbing (HLB) also known as citrus greening. It is imperative that ACP populations be kept as low as possible to reduce the risk that the psyllid finds and feeds on an HLB-infected tree and spreads the disease. To keep the psyllid from spreading, ACP host plants (citrus and close relatives such as orange jessamine and Indian curry leaf) in affected counties are under quarantine; they cannot be moved out of these quarantine areas. The box on page 3 has links to the quarantine areas.

We cannot stress strongly enough that retail nurseries and garden centers, residents, and landscapers can play major roles in minimizing the spread of this pest and HLB. Please read the guidelines below to learn more about what you can do in your store and what to tell customers.

### *Best Management Practices for Nursery and Garden Centers:*

- Citrus trees are treated with insecticides to remove pests when they leave wholesale nurseries and to keep ACP from feeding on them. However, these treatments remain effective for only about three months. Citrus stock should be sold before trees lose this protection. Stock that is in the retail nursery for close to 3 months should be returned or destroyed.
- If possible, place trees inside a screened-in structure to protect them against psyllids. If this is not an option, take advantage of ACP's preference for sunny, warm conditions

... continued p.3



*Highly magnified adult Asian citrus psyllid feeding on citrus.*

B. GRAFTON-CARDWELL



*Huanglongbing (HLB) leaf symptoms.*

B. GRAFTON-CARDWELL



# Retailers Receive IPM Training in 2016

**G**ardeners and other consumers frequently look to retail nursery and garden center employees to answer questions about pests and pesticides.

On January 28, 2016 UC IPM held a workshop for retail employees in Ontario, CA focusing on integrated pest management (IPM) concepts and current issues. Partnering with local UC Cooperative Extension (UCCE) Advisors and Specialists, the day was filled with information participants could bring back to customers to address their pest and plant problems.

UC IPM plans to offer more retail nursery and garden center trainings the Fall of 2016 and Winter 2017 in other parts of the state. Topics addressed in these workshops are detailed below.

## *Invasive Pests*

**John Kabashima** of UCCE Orange and Los Angeles counties provided an overview of invasive pests and the economic damage they cause in the United States. He demonstrated how pests enter the country and gain access to areas where they can thrive and spread. John emphasized the critical role retail nurseries and garden centers play in preventing the further spread of invasive pests.

## *Asian Citrus Psyllid and Huanglongbing*

Asian citrus psyllid (ACP) and the disease it vectors, huanglongbing (HLB), are the biggest threats to the California citrus industry today. **Matt Daugherty**, CE Specialist from UC Riverside, discussed how HLB spreads and outlined the current research and actions being done to manage ACP in California. He encouraged retailers to monitor plants, minimize infestations, and educate customers about quarantines. See page 1 for more about this pest.

## *Pesticides*

**Cheryl Wilen** (Area IPM Advisor, UCCE San Diego, Orange, and Los Angeles counties) explained the importance of reading and understanding pesticide



*Adult female polyphagous shothole borer, Euwallacea sp.*



*Rose leaves turning brown from drought stress.*

labels. She noted that comparing risks between types of pesticides and understanding their impact on people and the environment helps retail staff communicate options to the public so they can make a more informed choice on what products or tools to use.

## *Abiotic Plant Problems*

UCCE Advisor **Janet Hartin** (San Bernardino, Riverside and Los Angeles counties) talked about the difficulty in accurately diagnosing plant problems, because many pest and disease symptoms look similar to abiotic (nonliving) problems. Janet shared why it's important for retailers to know how to recognize the effects of drought, air pollution, and mineral deficiencies.

## *Resources*

Workshop participants were provided many "goodies" and informational materials at the training, including informa-



tion from groups such as the Citrus Pest & Disease Prevention Program ([CaliforniaCitrusThreat.org](http://CaliforniaCitrusThreat.org)) and PlantRight ([plantright.org](http://plantright.org)). Attendees also gained exclusive access to training materials presented during the workshop to assist them in sharing the information with others.

Subscribe to the **Retail Nursery & Garden Center IPM Newsletter** to keep informed about the next workshop. [ipm.ucanr.edu/RETAIL/retail-newsletter.html](http://ipm.ucanr.edu/RETAIL/retail-newsletter.html).

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**Pests in the Urban Landscape Blog**

[ucanr.edu/blogs/ucipmurbanpests](http://ucanr.edu/blogs/ucipmurbanpests)



# Asian Citrus Psyllid ...continued from Page 1

by keeping citrus and other hosts under shade structures or even inside the store.

- As you are caring for and handling your citrus stock, carefully check the leaves and stems for psyllids. See the online resources in the box for more photos and instructions on what to look for. If you see the psyllid, contact your County Agricultural Commissioner as soon as possible.
- Be sure your garden center or nursery sells or buys certified disease-tested trees from a reputable source. Uncertified trees may provide the insects with a source of the disease-causing bacteria they can pass on to other trees.
- Learn more about ACP by taking an online course for nurseries and garden centers. Go to [class.ucanr.edu](http://class.ucanr.edu) and look for the “Asian Citrus Psyllid & Huanglongbing for Retail Nurseries” course.

## What to tell Homeowners and Landscapers:

- Citrus trees sold within an ACP quarantine area will have a blue or yellow tag indicating they must stay within the quarantine area. Educate customers about the quarantine boundaries and that they need to comply with quarantines in order to protect uninfested areas.
- Show your customers how to carefully check the leaves and stems for psyllids and disease symptoms whenever they are caring for citrus.
- If homeowners or landscapers suspect they have seen the psyllid, advise them to immediately call the CDFA Hotline 1-800-491-1899. CDFA personnel will tell the caller if CDFA will be treating the reported trees or if the homeowner should manage the ACP population.
- A range of insecticides are available for ACP management, including products for use in a residential setting. Homeowners and landscapers can learn about them at the websites listed in the box below.
- If customers are in an ACP-infested area, advise them to handle green waste carefully. Dry out or double bag citrus

## See these web sites for more information:

- UC IPM Asian Citrus Psyllid Pest Note: [ipm.ucanr.edu/PMG/PESTNOTES/pn74155.html](http://ipm.ucanr.edu/PMG/PESTNOTES/pn74155.html)
- Photos of the psyllid and disease: [CaliforniaCitrusThreat.org](http://CaliforniaCitrusThreat.org) or [PeligranCitrusenCalifornia.com](http://PeligranCitrusenCalifornia.com)
- Maps of the distribution of ACP, HLB, quarantines in California, and tips for what to do: [ucanr.edu/sites/ACP/Distribution\\_of\\_ACP\\_in\\_California](http://ucanr.edu/sites/ACP/Distribution_of_ACP_in_California)
- Online courses: [class.ucanr.edu](http://class.ucanr.edu)



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*Asian citrus psyllid adults and nymphs feeding on new citrus growth.*

trimmings from pruning before moving it offsite to prevent transporting ACP to new areas.

- Provide information about insecticides effective against psyllids and tips for application. See the UC IPM [Asian Citrus Psyllid](#) Pest Note link in the box at left.
- If clientele think they have seen HLB disease (see the link to pictures in the box), tell them to immediately call the CDFA hotline 1-800-491-1899. CDFA personnel will take leaf samples to confirm infection of the tree by a biochemical test.
- Encourage customers to learn more by taking the online course about ACP and HLB in residential citrus: Go to [class.ucanr.edu](http://class.ucanr.edu), then click on the “ACP & HLB” link under “Master Gardener Courses.”

**Be vigilant and help to protect California’s citrus trees!**

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# JUST RELEASED!

## Pests of Landscape Trees and Shrubs - NEW 3rd Edition!

Completely revised and expanded, UC ANR just released *Pests of Landscape Trees and Shrubs*, 3rd edition, a comprehensive, how-to resource for landscapers, arborists, home gardeners, retailers, and parks and grounds managers. This integrated pest management (IPM) guide is easy to use and covers hundreds of insects, mites, nematodes, plant diseases, and weeds that can damage California landscapes.

The book's 437 pages presents the practical experience and research-based advice of over 100 University of California (UC) and industry experts, including:

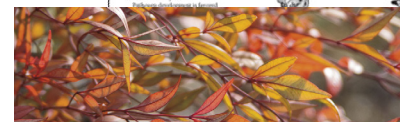
- Pest-resistant plants and landscape design
- Planting, irrigating, and other cultural practices that keep plants healthy
- Conserving natural enemies to biologically control pests
- Efficient monitoring so you know when to act
- Selective pesticides and when their use may be warranted
- Many references to regularly-updated, online guides with more pesticide choices and the latest IPM practices

### Additional features include:

- 575 high-quality, color photographs to help you recognize the causes of plant damage and identify pests and their natural enemies
- 101 line drawings and charts of pest biology and control techniques
- Problem-solving tables to help you diagnose the pests and maladies of over 200 genera of alphabetically-listed trees and shrubs

Priced at only **\$37.00** (+ shipping & handling), now is a great time to update your IPM library with this indispensable resource! *Pests of Landscape Trees and Shrubs: An Integrated Pest Management Guide*, third edition, UC Agriculture and Natural Resources publication 3359, can be purchased online at [anrcatalog.ucanr.edu](http://anrcatalog.ucanr.edu).

See this and other UC IPM books and publications at [ipm.ucanr.edu/IPM-PROJECT/pubs.html](http://ipm.ucanr.edu/IPM-PROJECT/pubs.html).



### Pests of Landscape Trees and Shrubs

An Integrated Pest Management Guide  
THIRD EDITION



UC STATEWIDE INTEGRATED PEST MANAGEMENT PROGRAM



Publication 3359

University of California  
Agriculture and Natural Resources

## New & Revised Pest Notes

**Mealybugs** is a brand new Pest Note on this common honeydew-producing insect pest. It's available online and as a printable PDF at [ipm.ucanr.edu/PMG/PESTNOTES/pn74174.html](http://ipm.ucanr.edu/PMG/PESTNOTES/pn74174.html).

**Weed Management in Lawns**, [ipm.ucanr.edu/PMG/PESTNOTES/pn74113.html](http://ipm.ucanr.edu/PMG/PESTNOTES/pn74113.html). Newly revised, this comprehensive guide covers common weeds, cultural control methods, and herbicides.

To access the nearly 170 other Pest Notes titles, visit UC IPM's Pest Notes Web page, [ipm.ucanr.edu/PMG/PESTNOTES](http://ipm.ucanr.edu/PMG/PESTNOTES).



Produced by the University of California Statewide IPM Program with partial funding from the USDA NIFA EIPM Coordination Program. To simplify information, trade names of products have been used. No endorsement of named products is intended, nor is criticism implied of similar products not mentioned.

For more information about managing pests, contact your University of California Cooperative Extension office listed under the county government pages of your phone book, or visit the UC IPM Web site at [ipm.ucanr.edu](http://ipm.ucanr.edu).

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Inquiries regarding ANR's nondiscrimination policies may be directed to John Sims, Affirmative Action Contact, University of California, Agriculture and Natural Resources, 2801 Second Street, Davis, CA 95618, (530) 750-1397.