



## UC MASTER GARDENER PROGRAM OF SAN LUIS OBISPO COUNTY

The UC Master Gardener Program is a public service and outreach program under the University of California Division of Agriculture and Natural Resources (UC ANR), administered locally by participating UC Cooperative Extension offices (UCCE). Our mission is to extend research based knowledge and information on home horticulture, pest management, and sustainable landscape practices to the residents of California.

### ASIAN CITRUS PSYLLID

Ray Festa, UC Master Gardener

- Asian citrus psyllid (ACP) is a tiny winged insect that feeds on all citrus, plus related ornamental plants such as calamondin, box orange, Indian curry leaf, and orange jasmine.
- ACP is widely distributed in Southern California and was first discovered in SLO County in March 2014.
- ACP can transmit huanglongbing (HLB), also called citrus greening. It is a devastating bacterial disease fatal to all citrus.
- Symptoms of HLB do not appear for 2-3 years after infection. Tree death occurs in 5-10 years and there is no cure.



*The Asian Citrus Psyllid spreads huanglongbing (HLB) disease*

#### Why are ACP and HLB important?

- They pose a serious threat to California citrus, both commercial and residential.
- California is the top citrus producing state with \$2.2 billion production value.
- Over the past 10 years, Florida has experienced a 75% loss of commercial citrus production. In the past 5 years, Florida has lost over 6,600 jobs and over \$7 billion in lost revenue to growers. Currently, 70-90% of citrus in Florida are infected with HLB disease.
- We could potentially lose an important food source as well as a valued ornamental component of our landscape.

#### Origin and Spread of ACP and HLB

- ACP and HLB originated in Asia or India and spread to citrus regions worldwide.
- ACP first appeared in Florida in June 1998, eventually spreading to the South and Southwest states.
- ACP was first found in California in 2008 (San Diego County). The psyllid is present in 21 California counties.
- The first confirmed case of HLB in California was found in Hacienda Heights (Los Angeles) in March 2012 on a grafted pomelo/lemon tree.

- By April 2017, a total of 53 HLB infected trees have been found and destroyed in California. All have been in Los Angeles area residential neighborhoods, spreading from the original Hacienda Heights site.
- HLB has been confirmed in Florida, Georgia, Louisiana, South Carolina, Texas, California, Puerto Rico, the U.S. Virgin Islands, and most recently in Alabama.
- HLB has not been found in commercial groves in California.
- HLB has not been found in SLO County.

### ACP Identification:



*Top, Asian citrus psyllid adult and nymphs.  
Middle, adult psyllid on finger.*

- Tiny 1/8" mottled brown winged insect, about the size of an aphid.
- Wings with mottled brown pattern along edges, pale color in central wing area.
- Adult ACP feed in a head down, tail up, 45 degree position simulating a thorn, a unique characteristic.
- Young ACP (nymphs) are tiny, yellowish and wingless. They feed on new, tender leaf tissue (feather flush leaves) at tips of branches.
- Nymphs produce white, waxy coiled tubules with a bulb at the ends, an identifying feature of ACP.
- Damage from feeding includes twisted, coiled leaves. ACP produces honeydew so sooty mold and ants may be present.
- Other common pests cause curling of leaves: leafminer and aphids.
- Other common pests secrete honeydew: aphids, whiteflies and scales.
- Trees can tolerate ACP feeding damage, but if the insect is carrying the HLB bacteria then feeding will transmit HLB.

## Huanglongbing (HLB):



- Not all ACP carry the disease. The psyllid acquires the bacteria after feeding on an infected tree. The psyllid remains infected for the remainder of its life, transmitting the disease when feeding on healthy trees.
- HLB can also be transmitted by grafting of infected scion wood.
- Diseased trees take years to exhibit symptoms:
  - Asymmetrical yellowing of leaves on individual limbs or sectors of tree canopy.
  - Yellow leaf blotches do not match on both sides of leaves, unlike nutritional deficiency yellowing which is symmetrical and matching.
  - Reduced fruit size, juice becomes bitter.
  - Fruit becomes distorted, does not ripen and remains partially green.
- HLB does not pose a threat to humans or animals.

## Control:

- Goal is to reduce the ACP population and slow the spread and establishment of HLB.
- Commercial groves are being treated with insecticides to control psyllids.
- Parasitic wasps imported from Pakistan have been introduced to Southern California and are being monitored for their ability to control ACP nymphs.
- Nymph predators include lady beetle adults and larvae, syrphid fly larvae, lacewing larvae and minute pirate bugs.
- Some spiders, birds and other predators feed on adult psyllids.
- Yellow sticky traps are used to monitor for ACP. Results guide quarantine zones and residential chemical and biological control measures.

## What Can We Do to Save Our Citrus?

- **DO NOT MOVE CITRUS:** do not transport citrus plants or plant parts in or out of ACP quarantine areas, city, county or state. Call County Ag. Office at (805) 781-5910 for information on quarantine areas in California.
- **BUY LOCAL:** buy citrus trees from reputable local sources selling trees inspected by the County Agriculture Officials.
- In quarantine areas, do not remove or share citrus fruit, trees, clippings, or grafts. Fruit may be harvested and consumed on site.
- Use only registered bud wood with source documentation when grafting citrus trees. Find information about clean citrus stock online from the **Citrus Clonal Protection Program**.

- Check your citrus trees monthly. Examine new feather flush growth with hand lens for ACP.
- If you suspect ACP is present or have questions concerning ACP or HLB, contact **CDFA pest hotline at 1-800-491-1899** for verification and advice. Do not transport suspicious samples to a nursery, Master Gardener helpline or Ag office.
- Control ants on citrus trees with Tanglefoot. These insects interfere with beneficial insects and actually protect pests like the Asian Citrus Psyllid.
- Volunteer to have monitoring traps placed in your citrus trees by contacting the County Ag Commissioner's staff (805) 781-5910.

## ACP Report 2017 SLO County- Agriculture Commissioners Office

ACP was first detected in SLO County in Arroyo Grande 3/20/14. ACP has been verified in Arroyo Grande, San Luis Obispo, Cayucos, Bull Canyon, Nipomo, Grover Beach, Oceano and Paso Robles.

YEAR	ADULTS	NYMPHS	
2014	65	42	
2015	78	51	
2016	200	0	
2017	1	0	

County trappers monitor exotic pests: ACP; Mediterranean, oriental, Mexican and Melon fruit flies; Gypsy moth; Japanese beetle; Glassy-winged sharpshooter, Light Brown Apple Moth.

## References:

*Asian Citrus Psyllid and Huanglongbing Disease Management Guidelines--UC IPM.* [online] Available at: <http://ipm.ucanr.edu/PMG/PESTNOTES/pn74155.html> [Accessed 8 Jul. 2017].

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*Residential ACP Management Strategy.* [online] Ucanr.edu. Available at: [http://ucanr.edu/sites/ACP/Homeowner\\_Options/Homeowner\\_Management/](http://ucanr.edu/sites/ACP/Homeowner_Options/Homeowner_Management/)

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GARDENING QUESTIONS? ASK THE MASTER GARDENERS AT HELPLINE: 805-781-5939



Website: Master Gardeners San Luis Obispo

Availability	↔	on VMS > Documents/Presentations > INFO DOCS > Asian Citrus Psyllid
History	↔	Original: 7/12/17 Revised: month/year: