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A little bug, but a big problem

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Marin gardeners should be on the alert for a dangerous pest. The Asian citrus psyllid is a tiny insect and disease vector that eats citrus leaves and stems. The females lay their eggs in the new leaf growth called flush. As the insect munches, it injects a salivary toxin into the plant that causes the leaf tips to twist or curl and infects the tree with a killer bacterium.

Just one Asian citrus psyllid was found in Marin County in 2018; extensive trapping was initiated and thankfully no more pests were found. But, gardeners must stay vigilant.

Keep an eye out for the white, waxy, curlicue substance that is found on the stems and leaves of citrus plants, exuded by Asian citrus psyllid nymphs.
The bacteria Huanglongbing, or HLB, was discovered in Asia and moved to the Americas as citrus plants were bought and sold. In Florida, the psyllid and HLB is spreading rapidly from backyards and commercial orchards with drastic impact on the citrus market there. HLB is not harmful to humans. But thousands of jobs have been lost and it has cost growers billions of dollars. HBL migrated from Mexico to Southern California in 2008 and is well-established there.

Fortunately, a new treatment has been developed that kills the HLB with a naturally occurring molecule found in wild citrus relatives. This molecule offers advantages over the antibiotics currently used to treat the disease in orchards. But gardener awareness and early identification of the pest is critical.

This is where you, the Marin County gardener, comes in. By keeping a close watch on your citrus trees like lemons, limes, oranges, grapefruit and related plants in the Rutaceae family, such as mock orange and orange jasmine plants, you can serve as first responders.

Observation and detection are the top priorities. The psyllid is mottled brown and about the size of an aphid. In a unique pose, the psyllid eats head down, its body tilted at a 45-degree angle, lifting its tail high in the air. Check out the new leaf growth or new flush, because the psyllid lays its eggs there. The eggs are tiny yellow-orange and almond-shaped. One female can lay several hundred eggs. The psyllids also produce a white, curlicue waxy substance that can be found on the leaves of the citrus plant.

Asian citrus psyllids on the leaves and stems of citrus plants.
If you find an adult or an insect in an immature stage, call the California Department of Food and Agriculture Exotic Pest Line at 1-800-491-1899.

In terms of integrated pest management, there is some biological control of the psyllid with the use of a parasitoid wasp, Tamarixia radiata. The tiny wasp lays eggs in the psyllid's abdomen and as the eggs develop they kill and eat the psyllid. However, the wasp needs time to become established and the effectiveness is not sufficient to prevent the spread of the insect.

In commercial orchards, in addition to the new molecular treatment, farmers are using many different types of insecticides and antibiotics after finding that a single insecticide isn't effective

for all stages of the psyllid lifecycle. Diseased trees must be removed in order to stop the spread to other trees on the property, the neighbor's trees and the community. For the residential citrus-grower, a trusted arborist can guide you on what might be an effective resolution or safe tree removal.

The female psyllid lays her eggs in the newly emerging leaves.
Another way to protect the community and your garden from the Asian citrus psyllid and Huanglongbing disease is to purchase your citrus plants locally, being careful not to bring citrus agricultural products in from other states or countries. Not only is this practice illegal, but it also can create a pest problem for producers and home gardeners.

If you find evidence of the Asian citrus psyllid in your garden, the agricultural authorities will want to inspect your citrus plants, take samples for laboratory and possibly do some trapping or quarantining. Your cooperation is needed to determine the extent of the infestation.