UC 🔶 IPM Home & Garden Pest Newsletter

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Special Invasive Species Issue

N atural disasters like wildfires happen quickly, and their impacts are obvious. In contrast, damage from invasive species is slower and not always apparent but it can be just as serious. Invasive mosquitoes can transmit deadly diseases, invasive rodents like nutria can damage critical infrastructure such as flood control levees, and invasive plants can increase the risk of wildfires. While these problems may seem too large and out of our control, we can help to manage and prevent the spread of invasive species. In this special newsletter issue, we're featuring articles on California's detector dog teams that work to keep invasive species out of our state and on the dotted paropsine leaf beetle, a new invasive pest. We're also providing invasive species resources.

What is an invasive species?

An invasive species is one that doesn't occur naturally in a specific area **and** causes harm to agriculture, the environment, or human health. Invasive species can be all kinds of organisms, including insects, weeds, pathogens that cause diseases, and vertebrates. They threaten our native ecosystems, recreation areas, food and water supply, public health, economy, and even our homes and gardens.

Invasive species in the news

Invasive species information can change rapidly, and staying informed about these threats can help with early detection and management efforts.

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Ash trees killed by emerald ash borer infestations.





Invasives continued from p. 1

Keep an eye out for spotted lanternfly and emerald ash borer. These insects have not been found in California but would devastate our crops, forests, and landscape trees if they arrive. The emerald ash borer was reported in Oregon last year. The spotted lanternfly is infesting 18 states on the East Coast, including Connecticut, New Jersey, Pennsylvania, and Virginia.

Invasive shothole borer (ISHB) beetles that have already killed tens of thousands of trees in Southern California were found in the San Francisco Bay Area for the first time in 2023. In addition, a closely related species of ISHB new to the West Coast, *Euwallacea interjectus*, was detected in Santa Cruz County in 2024.

The golden mussel, a bivalve that clogs waterways and contributes to harmful algal blooms, was detected in the Sacramento-San Joaquin Delta in 2024.

In California last year, there were 18 locally acquired dengue virus infections due to bites by the invasive *Aedes* mosquito.

California Invasive Species Action Week

On June 7, 2025 California Invasive Species Action Week (CISAW) <u>wildlife.ca.gov/Conservation/</u> <u>Invasives/Action-Week</u> kicks off to increase public awareness of important invasive species that threaten our state. As the weather warms up and we spend more time outdoors and traveling, we are more likely to encounter these pests in the garden or landscape and transport them by accident. During CISAW and throughout the rest of the year, we will be sharing more information about important invasive species and actions you can take. Stay tuned for blog posts, webinars, and more!

What can you do to help?

- * Avoid planting invasive plants. Invasive plants in California are often brought in as ornamentals and sold in nurseries and online. Learn which plants are invasive and which are native to your area.
- * **Don't move firewood**. Tree-destroying invasive pests are often spread to new locations



on firewood. Buy firewood where you plan to burn it!

- * Prevent the spread of invasive mosquitoes. Eliminate standing water around your home and follow other IPM recommendations for managing mosquitoes. Read more in our blog post about *Aedes* mosquitoes: ucanr. edu/blog/pests-urban-landscape/article/ invasive-pest-spotlight-aedes-mosquitoes.
- Follow local quarantines. To prevent the spread of invasive pests to new areas, the California Department of Food and Agriculture puts quarantines in place. Quarantine areas can encompass large regions or small parts of a county. Make yourself familiar with these regulations, especially when you travel.
- * Report invasive species of concern. Contact your local UC Cooperative Extension office or Agricultural Commissioner to report any potential sightings of invasive species.
- * Learn about invasive pests. Visit UC IPM's Invasive & Exotic pests pages for more information.
- Attend a free webinar. Join invasive species experts for five free webinars offered June 9–12, 2025 to learn more about invasive pest issues in California. See page 5 for more information.

See page 8 for more invasive species resources.

—UC IPM Urban & Community Team, ucipm-community@ucanr.edu



The Dotted Paropsine Leaf Beetle Threatens California's Eucalyptus

The dotted paropsine leaf beetle (*Paropsis atomaria*), an invasive pest native to Australia, was first discovered in California in 2022 and is rapidly spreading throughout Southern California targeting eucalyptus trees. Both adult beetles and their larvae feed on eucalyptus leaves, causing significant defoliation that can result in tree death.

Brought (or "introduced") to California in the mid-1800s, eucalyptus trees are now an iconic part of California's landscape. Since eucalyptus was first propagated from seed brought from Australia, the pests and diseases associated with living trees were not also introduced. Eucalyptus remained relatively pest free until the first major pest, the eucalyptus longhorned borer (*Phoracantha semipunctata*), was found in 1984. Since then, several major pests can now be found on eucalyptus, with the latest threat being the dotted paropsine leaf beetle. It is not clear how some of these pests came to California, but we do know that several can cause significant damage.

The dotted paropsine leaf beetle was first discovered feeding on lemon scented gum (*Corymbia citriodora*) in Los Angeles in August 2022. This was the first report of this beetle in North America and it has quickly spread throughout Southern California. Currently the beetle can be found throughout Los Angeles, Orange, San Diego, and San Bernadino counties with unconfirmed reports in Ventura County. The beetle has a broad host range, feeding on over 20 *Eucalyptus* and *Corymbia* species commonly found in California, including *E. camaldulensis* (red gum), *E. globulus* (blue gum), *E. polyanthemos* (silver dollar gum), *E. cladocalyx* (sugar gum), and *C. citriodora* (lemon-scented gum).

Identifying the dotted paropsine leaf beetle

The dotted paropsine leaf beetle is a member of the Chrysomelidae family, known as leaf-feeding beetles. Adult beetles are oval-shaped and are about ¾ of an inch in size. They are easily identified by the yellow and orange markings, along with



Dotted paropsine leaf beetle adult and larvae feeding on eucalyptus.

black spots on their wing case. Their bright coloring stands out against the green eucalyptus foliage making them easy to see.

Females lay 20-100 eggs in a circular cluster around young stems and leaves. When the larvae hatch, they are yellowish in color with black heads and black ends. As they mature through four larval instars, they develop black stripes along the top and sides of the body. Larvae have defensive glands on their rear ends and when threatened will discharge droplets. Mature larvae drop to the ground to pupate in the leaf litter.

In California, this beetle has two generations a year and can quickly build up in high numbers, leading to the rapid defoliation of susceptible *Eucalyptus* species, especially during peak feeding seasons in the spring and fall.

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Dotted Paropsine Leaf Beetle continued from p. 3

Other eucalyptus leaf-feeding beetles in California

The introduction of the dotted paropsine leaf beetle is part of a larger trend of eucalyptus-feeding beetle introductions in California. Two notable examples include *Trachymela sloanei* and *Chrysophtharta m-fuscum*.

Eucalyptus Tortoise Beetle (Trachymela sloanei):

- * Adults: Dark brown with blackish mottling
- * Larvae: Dark green to reddish brown with a black head; feeds at night
- Damage: Feeds on eucalyptus foliage causing partial defoliation but is not as devastating as the dotted paropsine leaf beetle

Eucalyptus Leaf Beetle (*Chrysophtharta m-fuscum*):

- * Adults: Gray to reddish brown
- * Larvae: Light greenish gray with a black head; feeds during the day
- Damage: Primarily feeds on the leaves and stems causing extensive defoliation. Its feeding behavior is more aggressive than the eucalyptus tortoise beetle, and when left unchecked can defoliate entire branches

Dotted paropsine leaf beetle damage and management

The dotted paropsine leaf beetle feeds primarily on the foliage of its host trees. Both adults and larvae cause damage by notching the leaves, which can quickly lead to stripping entire branches of their leaves. In severe infestations entire trees are defoliated, severely weakening the tree. Over time, repeated infestations can cause tree death, particularly in newly planted trees or those that are already stressed due to environmental conditions.

The beetles tend to congregate in high numbers, and during heavy infestations, it's common to see multiple larval stages and adults clustering on different parts of the tree, as well as on the ground surrounding it.

Given the similarity between the eucalyptus leaf-feeding beetles, the management strategies will likely be similar for all. Strategies include a



Dotted paropsine leaf beetle eggs.

combination of cultural, biological, and chemical control methods. Read more on these other tortoise beetles on the UC IPM web site: *Pest Notes: Eucalyptus Tortoise Beetles* at ipm.ucanr.edu/PMG/PESTNOTES/pn74104.html.

Cultural control

Provide proper horticultural care, such as appropriate irrigation, to maintain tree health. Prune out infested branches and remove fallen leaves that may contain beetle larva.

Biological control

Currently there are no known natural enemies that feed on the beetle in California.

Chemical control

Hire a professional for insecticide applications. Neonicotinoid soil drenches and foliar sprays of carbaryl may be effective, but these materials are not available for home use and can only be used by licensed applicators.

As with many invasive pests, preventing the spread of the dotted paropsine leaf beetle is crucial. To help contain the infestation, avoid transporting infested plant material. Monitor newly planted eucalyptus trees for signs of beetle damage and inspect trees regularly to catch infestations early. The dotted paropsine leaf beetle is just one of several eucalyptus pests introduced to California, which together require a coordinated and comprehensive pest management approach.

> —Chris Shogren, Environmental Horticulture Advisor, UC Cooperative Extension, Los Angeles Co., <u>cjshogren@ucanr.edu</u>



Free Lunchtime Webinars for California Invasive Species Action Week

The California Invasive Species Action Week (CISAW) is a statewide, week-long event created to increase public awareness of invasive species in our state and to promote public participation year-round in invasive species management. Together we can protect California's natural resources! California Invasive Species Action Week is June 9–13, 2025. UCCE will be hosting a series of Lunchtime Talks via Zoom Webinar. Join the webinars at noon on weekdays in the second week of June for some engaging and enlightening presentations.









June 9 - Formosan Subterranean Termites: Will Your House Be Their Next Meal? Presented by Dr. Siavash Taravati, UC Cooperative Extension

June 10 - Anticipating the Next Invasive Threat to California Presented by Dr. Mark Hoddle, UC Riverside

June 11 - Don't Move a (Golden) Mussel Presented by Martha Volkoff, California Department of Fish and Wildlife

June 12 - *The Fast and the Furriest: Rats, Traps, and Winning the Race* Presented by Dr. Niamh Quinn, UC Cooperative Extension

June 13 - Palms and Eucalyptus Under Threat in the Golden State Presented by Dr. Eric Middleton, UC Cooperative Extension

For more information and to register for these free talks, visit <u>ucanr.edu/sites/invasivelunch/2025/</u>.

Dogs Sniff Out Pest Problems

D ogs use their keen sense of smell to help humans every day. Their powerful noses alert us to danger, aid in search and rescue operations, and even have the potential to diagnose diseases. But did you know that some dogs have been trained to sniff out potential invasive pests? Enter—the detector dogs!

What do detector dogs do?

Detector dog teams are stationed in several counties across California to help find invasive pests hitchhiking in packages and cargo. The dogs go through many weeks of training with their handlers, learning to sniff out materials that could harbor invasive species including fruit, plants, and soil. On the job, dogs alert their handlers if they smell these target odors inside packages. Trained biologists then inspect the packages for pests like insects and plant diseases that could be harmful to crops or the environment. The Detector Dog Team Program is a cooperative effort between the California Department of Food and Agriculture (CDFA), County Agricultural Commissioners, and the U.S. Department of Agriculture.

Meet Owen, San Diego County's fuzziest employee

Owen, a five-year-old black lab mix, and Melissa Sinkovits, a Senior Agricultural Standards Inspector, are a detector dog team serving San Diego County. A typical day on the job for them involves an early start, arriving at package delivery facilities around 6 a.m. After the detective work is done, Owen takes a well-deserved nap while Sinkovits does paperwork. Then, it's on to light training to keep Owen up to speed and interested in his work. Every workday includes enrichment time for him to play, go for walks, and just be a regular dog.

Sinkovits' favorite part of her job (aside from spending time with Owen) is helping the community in a unique way. As for Owen, he's in it for the fame. "Owen is thrilled to be doing what he's doing. He also gets a lot of attention at all the facilities we go to. He has a lot of friends and a lot of fans," Sinkovits says. He often receives cheers and applause from his fan club when he finds something,



Detector dog Owen poses with one of his finds: a bag of peaches.

and he loves it. Some of Owen's most interesting finds include treasures like truffle mushrooms from Bulgaria, a bag of wet pickleweed, and a box of moss, each inspected and sent on to their destinations.

Canines making a difference, and how you can help

From 2022 to 2023, California Detector Dog Teams intercepted 863 significant invasive pests including Asian citrus psyllid, Caribbean fruit fly, and red imported fire ant. More than half of these pests came from unmarked packages, meaning the parcels were not labeled with content and origin-as required for all agricultural products shipped to California. Plant products that violate guarantine regulations or contain invasive pests are disposed of properly, and the sender receives a notification by mail. According to Jasmine Lopez, Deputy Agricultural Commissioner/Sealer at San Diego County's Department of Agriculture, Weights and Measures, what makes the detector dog teams invaluable is their ability to find pests in these unmarked packages, which would otherwise be missed. Often, these packages are gifts of fruit from friends and family members who might not be aware of labelling requirements.

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Detector Dogs continued from p. 6



Detector dog Owen alerts handler Melissa Sinkovits to a package containing plant materials during a demonstration.



Inspector and dog handler Melissa with detector dog Owen.

Before sending or receiving plant products through the mail, check with your local county agricultural commissioner's office. Some products, like oranges and other citrus fruits, are under quarantine and should never be mailed to California. Lopez adds that for many purchases, "Buying locally is probably the best, especially from certified nurseries that are aware of the requirements for shipping." Third party vendors often don't know the requirements and it's possible their shipments could be affected or seized if not properly treated for pests or diseases. In San Diego County, we work directly with a lot of growers to make sure their requirements are met."

Resources for plant and animal inspections in California

Looking for more information? Here are some helpful resources:

- Detector Dog Team: Learn how trained dogs help protect California from invasive pests. Visit the Detector Dog Team website at <u>cdfa.ca.gov/plant/dogteams/</u>
- * Local Agricultural Offices: Find contact details for your county's agricultural commissioner. Visit the County Agricultural Commissioner Directory at <u>cdfa.ca.gov/exec/county/countymap/</u>
- Bringing Plants & Animals into California: Understand the rules for transporting plants and animals. Visit CDFA Guidelines on Transporting Plants & Animals at

cdfa.ca.gov/plant/pe/transport_animals_plants. html

> —Lindsey Hack, Invasive Species Educator, UC IPM, <u>Imhack@ucanr.edu</u>



Volunteers Needed for GSOB Blitz!

Do you hike in Southern California? The goldspotted oak borer (GSOB) is a tiny beetle causing a big problem for Southern California's oak trees. Help protect oak trees one hike at a time by joining a community-powered effort to detect and map goldspotted oak borer infestations.

Visit <u>ucanr.edu/site/goldspotted-oak-borer/gsob-blitz</u> to find out more and to register.



Invasive Species Resources

For further information about invasive species, here are some online resources to assist you in preventing and managing the invasive pests that threaten California.

University of California:

- * UC IPM Invasive & Exotics Pests pages ipm.ucanr.edu/invasive-and-exotic-pests/
- * Invasive Species List of California (UC Davis) calinvasives.ucdavis.edu/
- * UC Riverside Center for Invasive Species Research cisr.ucr.edu/
- * Invasive shothole borer <u>ucanr.edu/site/invasive-shothole-borers</u>
- * Mediterranean oak borer <u>ucanr.edu/site/mediterranean-oak-borer</u>
- * Goldspotted oak borer <u>ucanr.edu/site/goldspotted-oak-borer</u>

State and Federal Agencies:

- * The California Department of Food and Agriculture invasive pest resources (report a pest hotline, quarantines, and information about invasive pests of concern): <u>cdfa.ca.gov/plant/</u>
- * National Invasive Species Information Center invasivespeciesinfo.gov/
- * California Department of Fish & Wildlife Invasive Species Program <u>wildlife.ca.gov/Conservation/Invasives</u>

Invasive Plants:

- * California Invasive Plant Council (Cal IPC) cal-ipc.org/
- * PlantRight plantRight

Public Awareness Campaigns:

- * Firewood:
 - * <u>firewood.ca.gov/</u>
 - * <u>dontmovefirewood.org/</u>

For more information about managing pests, contact your University of California Cooperative Extension office, or visit the UC IPM website at <u>ipm.ucanr.edu</u>.

- ***** Recreation:
 - * playcleango.org/
 - * dontpackapest.com/

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