



GOLDSPOTTED OAK BORER - 2018



Goldspotted Oak Borer

12/1/2018

ABSTRACT

The Department of Agricultural Commissioner / Weights and Measures placed 54 “blunder” traps on the roads leading to Green Valley, Malibu, Topanga, Cheeseboro, and Palo Comado Canyon to detect an invasive beetle species called Goldspotted Oak Borer (GSOB). These traps were monitored from May 2018 to October 2018 when the adult beetles were active. Although no GSOB were detected, these borers continue to destroy oak trees in the community of Green Valley.

Goldspotted Oak Borer - 2018

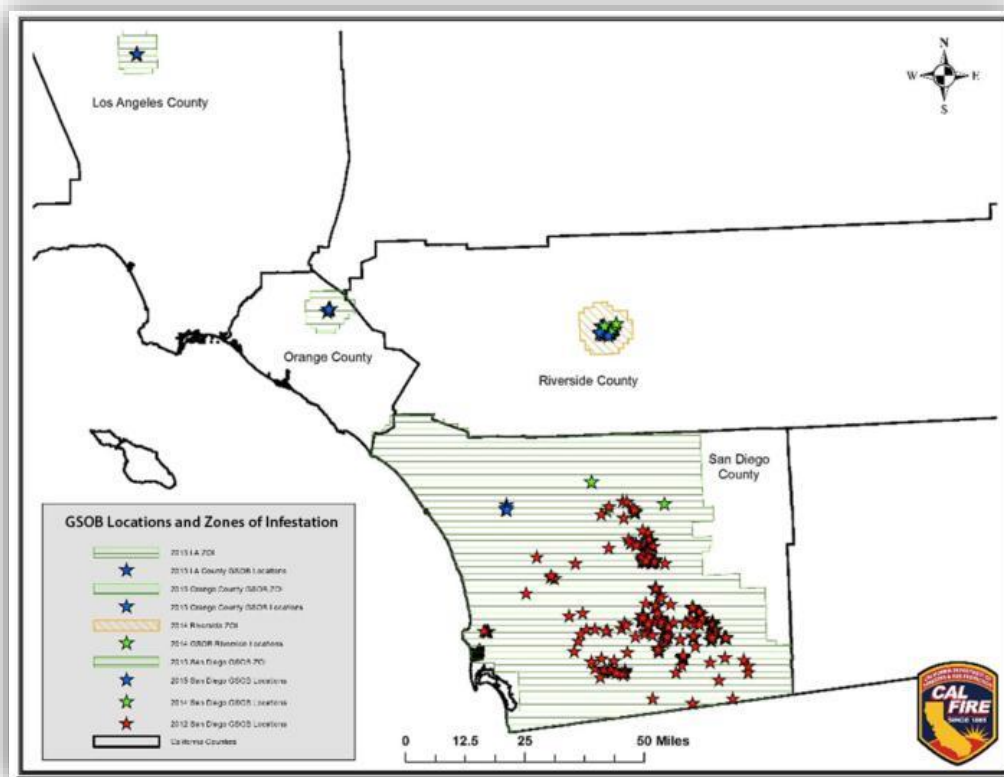
COMPLETE TRAPPING REPORT FOR GREEN VALLEY & STATE PARKS

BACKGROUND

In 2004, the Goldspotted Oak Borer (GSOB) was found in San Diego County. By 2008, the United States Department of Agriculture (USDA) confirmed that the flat-headed borer was the primary mortality agent affecting oak trees in the Cleveland National Forest.

After San Diego County lost an estimated 80,000 oak trees, the beetle infestation moved to Riverside County in 2012, Orange County in 2014, and Los Angeles County in 2015. It is believed that the infestation came to Los Angeles County by transport of infested oak firewood into Green Valley.

The Los Angeles County Fire Department – Forestry Division (Forestry) and the Department of Agricultural Commissioner/Weights and Measures (ACWM) are collaborating with UC Cooperative Extension, the California Department of Forestry and Fire Protection, and the US Forest Service to develop a response plan for GSOB in Los Angeles County.



Distribution of GSOBs detected within each county of Southern California from CAL FIRE

PREPARATIONS

At the beginning of 2016, the County of Los Angeles Forestry Division and ACWM's Pest Detection Division agreed to come up with a plan to detect GSOB. The Forestry Division were cutting down affected trees and began setting up traps in Green Valley. The Pest Detection Division monitored the areas outside of Green Valley to determine the scope of the infestation.

Due to a mortality increase of oak trees around Malibu Creek State Park, Topanga State Park, and Cheeseboro and Palo Comado Canyon, the Resource Conservation District of the Santa Monica Mountains reached out to ACWM for assistance in monitoring for GSOB. To place traps in State and Federal parks, ACWM had to apply for trapping permits. This permitting reviewed and approved our trapping methods to ensure that no endangered or protected species were accidentally caught in our traps.

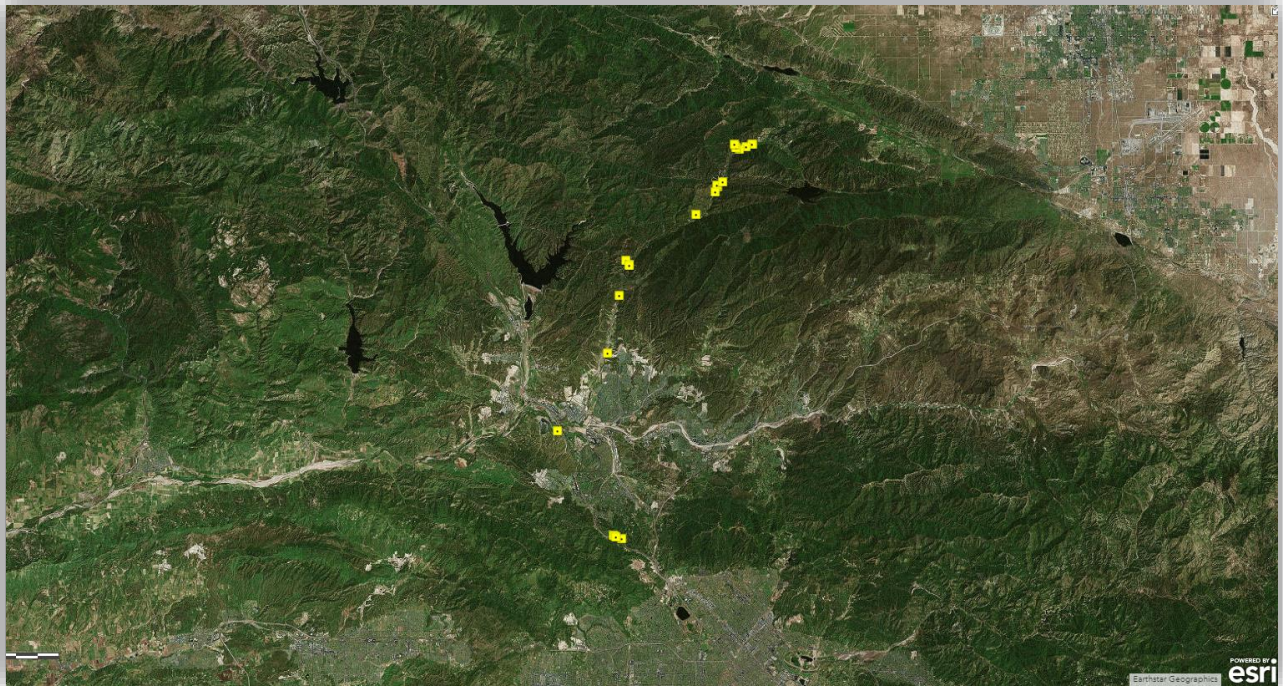


Oak tree mortality caused by GSOB in Green Valley, CA

DEPLOYMENT

The traps were deployed in four phases. On May 18, 2018, the first phase of GSOB traps were deployed in Green Valley. On May 25, 2018, the second phase of traps were deployed near Malibu Creek State Park. On June 15, 2018, the third phase of traps were deployed near Cheesboro and Palo Comado Canyon. On June 22, 2018, the fourth phase of traps were deployed near Topanga State Park. For coordinates and trap data, please contact Inspector Khoa Lam.

- Phase 1: Green Valley 24 traps
 - San Fernando Rd alongside a short stretch of the 5 Freeway.
 - San Francisquito Canyon Road and up to the Public Works yard
 - Department of Water and Power – Power Plant 1
 - Forest Service Rd 7N02 up to the Cisquito campgrounds
 - San Francisquito Canyon Road near the entrance into Green Valley

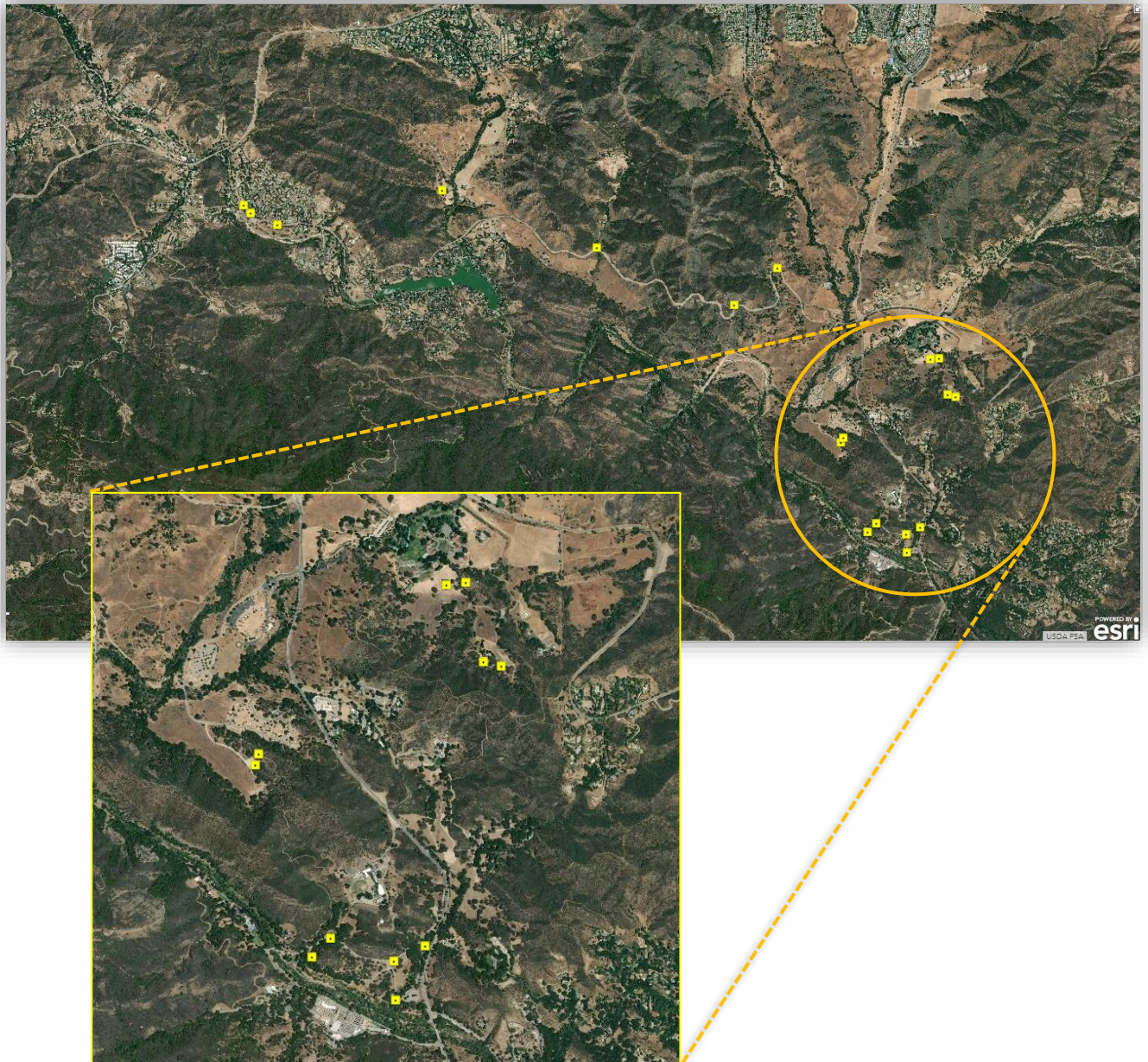


*The yellow dots represent locations where traps were installed.
The traps in the northern region leads right into the Green Valley community in upper right-hand corner.*

■ Phase 2: Malibu Creek State Park

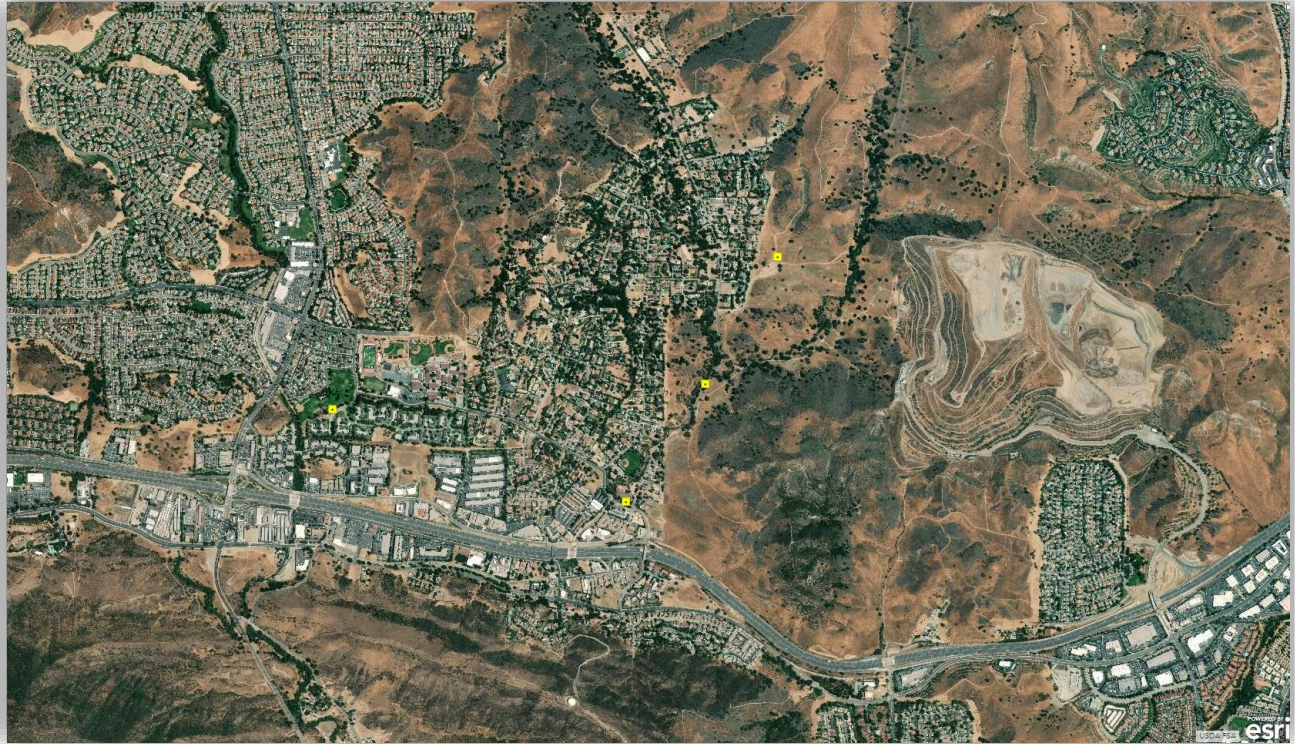
18 traps

- Paramount Ranch / Peter Strauss Ranch / King Gillette Ranch
- Malibu Creek State Park / Tapia Park / Along Mulholland Hwy



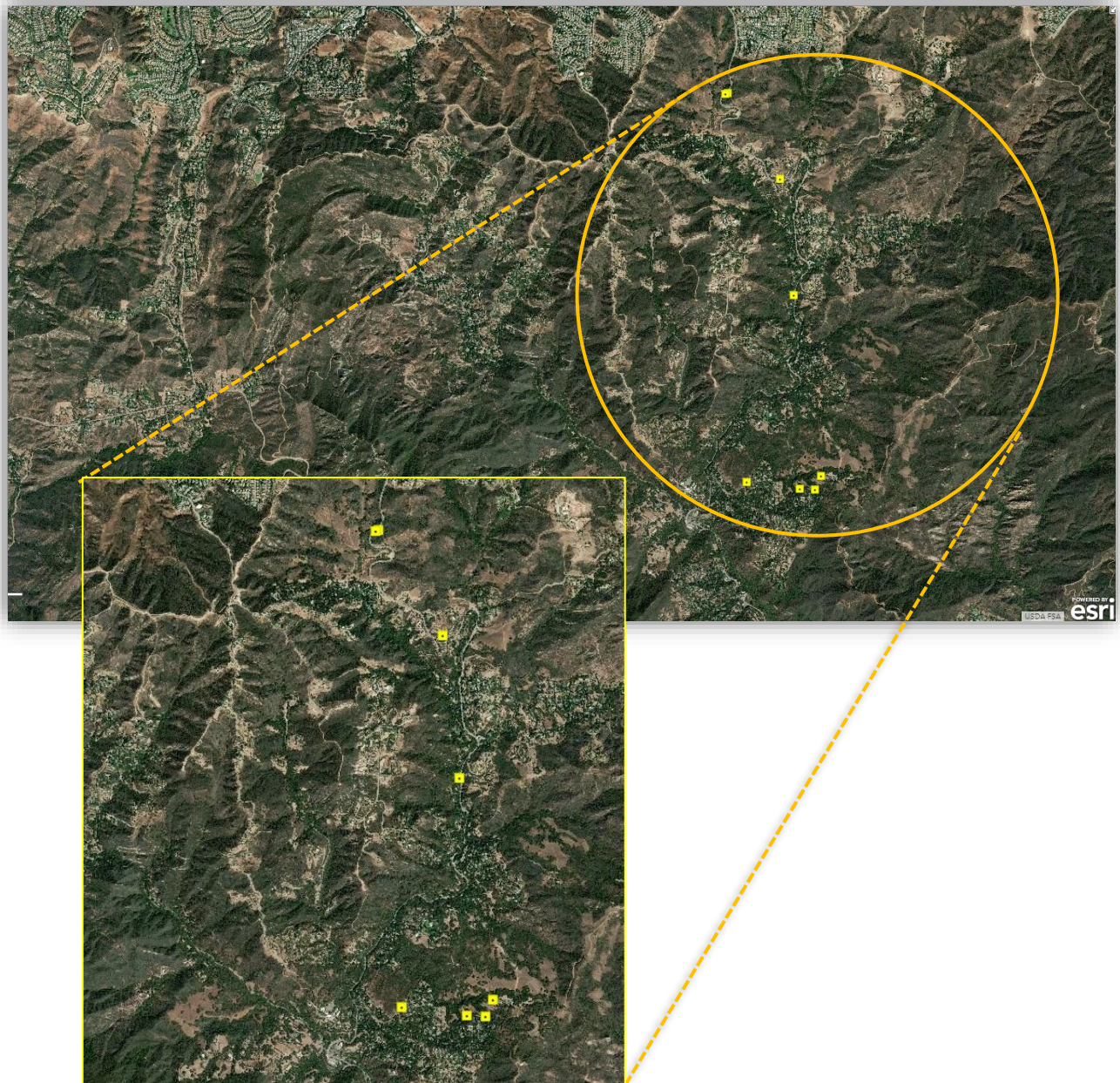
*The west side included Paramount Ranch, Peter Strauss Ranch, and parts of Mulholland Hwy.
The east side included King Gillette Ranch, Malibu Creek State Park and Tapia Park.*

- Phase 3: Cheeseboro and Palo Comado Canyon 4 traps
 - Cheeseboro Canyon / Cheeseboro Open Space / Chumash Park



The traps were placed along Cheseboro Road and leading up into Cheeseboro Canyon

- Phase 4: Topanga State Park 8 traps
 - Topanga State Park / Trippet Ranch / Along N Topanga Canyon Rd



The traps began from N Topanga Canyon Rd down to Trippet Ranch and Topanga State Park.

MONITORING

On average, the traps were inspected every 2-3 weeks and replaced when needed. The traps were inspected in the field, samples were collected, and sent to be identified. Dr. Gevork Arakelian, ACWM's entomologist, identified the suspect insects in his laboratory.

The typical pests found on the purple prism traps were:

Green Valley

- Darkling beetle
- Ground beetle
- Nautical borer *Xylotrechus nauticus*
- Oak twig borer *Styloxus fulleri californicus*

Malibu Creek State Park

- Click beetle
- Ground beetle
- Ambrosia beetles *Monarthrum* sp
- Gnawing bark beetle *Temnoscheila* sp.

Cheeseboro and Palo Comado Canyon

- Darkling beetles

Topanga State Park

- Click beetles
- Rove beetles
- Nautical borer *Xylotrechus nauticus*

We were not able to detect any GSOBs in any of our traps, but this is not definitive evidence that GSOB was not present.

Overall, the number of insects found on the traps were very few compared to the amount found in previous years. The reason why is not known, but one hypothesis for this variance could be due to natural disasters such as the La Tuna Fire last year in September 2017, or the Stone Fire in Agua Dulce on June 4, 2018.

CHALLENGES

During the trapping season, we met some challenges that were not anticipated:

ACCESS TO OAK TREES

Many oak trees showed signs of possible GSOB infestation, however, these trees were not accessible to place traps. Some trees were deep in the canyon, and others were behind fences along the highway. Because these were wild oak trees, thick shrubs and brushes often surrounded the base of the tree and made trap placement challenging.

WEATHER CONDITIONS

In 2016, the Santa Ana winds that blew through the canyons caused havoc upon the purple prism traps. A wind storm during the weekend of August 20-21, 2016, caused a lot of damage to the traps.

In 2017, we reinforced the mounting frame and anchored the purple prism traps down, which minimized the damage. Out of 45 traps, only 2 traps had broken anchor wires. The rest of the purple prism traps were secured and completely functional. This was easily resolved by anchoring the traps on both sides of the mounting frame.

In 2018, out of 54 traps, only 1 trap fell due to windy conditions. The rest of the traps were secured and endured throughout the entire season.

CONCLUSION

We learned many valuable lessons from using the purple prism traps to detect GSOB. By planning and trying to anticipate some of the challenges, we were able to deploy traps within the time when the adult GSOBs were active.

Although we did not detect any GSOBs, our trapping efforts were not in vain. We were able to monitor the situation and observed that the infestation appears to be contained to Green Valley. The residents of Green Valley are aware of the severity of this problem, and they are assisting County Forestry with identifying dying oak trees and not transporting firewood.

In Topanga, Malibu, and Cheesboro, GSOBs were not detected. Overall, the number of insects found on the traps were much fewer than the previous years. Even the number of non-targeted pests like ants, gnats, termites, and spiders, were very little. This could be due to the recent fires Los Angeles County had gone through in 2017 and 2018, which may or may not have an environmental impact on the insect population.

In closing, we would like to stress that not detecting GSOB in our traps is not definitive proof that the insect is present in the areas trapped.

SPECIAL THANKS AND RECOGNITION

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CA DEPT OF PARKS & RECREATION	parks.ca.gov
MTNS RECREATION & CONSERVATION AUTHORITY	mrca.ca.gov
RESOURCE CONSERVATION DISTRICT OF THE SANTA MONICA MOUNTAINS	rcdsmm.org