
Proactive Surveys for Incipient Populations of the Avocado Seed Moth, *Stenoma catenifer*, in California

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Stenoma catenifer, the avocado seed moth, has been identified as an exotic pest that has the potential to enter and establish in California because of imports of fresh avocado fruit from Mexico and other Central and South American countries where this pest is endemic (e.g., Peru). This moth has been subject to extensive study in Guatemala over a 2.5 year period. One of the major outcomes of this work has been the isolation, identification, and successful field evaluation of the sex pheromone of this pest. The next step is to use the pheromone to begin monitoring for *Stenoma* incursions into California. This final report provides results for the pheromone monitoring program for *Stenoma* throughout the major avocado growing regions of California.



Fig. 1. Shows a Hass fruit damaged by internally feeding *Stenoma* larvae in Guatemala. **(2)** An adult *Stenoma* resting on an avocado seed. **(3)** A large *Stenoma* larva emerging from a feeding gallery in an avocado seed. This moth represents a major incursion threat to California avocado growers. Deployment of the sex pheromone of this pest throughout California will help detect small populations while they are still highly localized making eradication feasible.

On April 5 2010, 22 pheromone traps with the *Stenoma* pheromone were deployed across 22 sites in Southern California. Traps were deployed in residential areas in San Diego County where invasive pests have first been detected before (e.g., avocado lace bug), in orchards that have packing houses nearby, in commercial fruit exchanges in downtown LA, and in and around cooperating packinghouses. Traps were deployed for 2 weeks, taken down and returned to the lab for inspection. No *Stenoma* were found, but other brown moths were caught. These moths have been removed from the traps and have been mounted for use in a reference collection to identify collected moths as either *Stenoma* or non-*Stenoma*. The reference collection will be turned over to the CAC so that the industry can run and maintain this surveillance system and successfully identify *Stenoma* should it be captured.

Traps were redeployed every other month and left for two weeks before being pulled down and inspected for *Stenoma*. This project has met its required goals. Monitoring will not be continued in 2011, the proposal for this work was withdrawn and materials have been handed over to the CAC for the industry to maintain to this monitoring system.

The distribution of the 22 *Stenoma* traps in Southern California is shown in the Google Earth Map below.



For more information on *Stenoma* and more color photos of this pest, the damage it causes, and its natural enemies please visit:

<http://www.biocontrol.ucr.edu/Stenoma/Stenoma.html>