

# Can indigenous insects be used against the light brown apple moth?

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The light brown apple moth (LBAM), *Epiphyas postvittana* (Walker), an invasive insect from Australia, was found in California in 2006. The LBAM feeds on apples, pears, stonefruits, citrus, grapes, berries and many other plants. A native of Australia, it has been found in California since 2007. The California Department of Food and Agriculture has spent more than \$70 million in CDFA and USDA funds to eradicate the LBAM, and estimates that failure to eradicate it could cost California growers over \$133 million per year.

In "[Light Brown Apple Moth in California: A Diversity of Host Plants and Indigenous Parasitoids](#)," a new study published in *Environmental Entomology*, the authors surveyed plants that were especially susceptible to LBAM infestations in order to find suitable insect parasitoids to be used as [biocontrol agents](#) to control the LBAM.

Twelve primary parasitoid species and two hyperparasitoids were then reared. The most common were the egg parasitoid *Trichogramma fasciatum* (Perkins), the larval parasitoids *Meteorus ictericus* Nees, and *Enytus eureka* (Ashmead), and the pupal parasitoid *Pediobius ni* Peck. *Meteorus ictericus* accounted for more than 80% of the larval parasitoids, and was recovered from larvae collected on 39 plant species. Across all samples, mean [parasitism](#) was 84.4% for eggs, 43.6% for larvae, and 57.5% for pupae.

The results show that resident parasitoids may already be contributing to the suppression of LBAM populations in California, at least on the host

plant species monitored in the surveys. Further work may show whether adequate suppression of LBAM can be achieved by resident parasitoids present in the [urban environments](#) of California or whether introductions of specialized parasitoid species from Australia would aid in the future management of this new invader.

As the LBAM expands its range in California, the authors suggest that additional parasitoid species will be found using this pest as a novel host and that further studies will better elucidate the levels of pest suppression and help to determine the need for classical biological controls, as well as targeting those natural enemies that might best fit into the parasitoid assemblage already present in California.

Provided by Entomological Society of America

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