

Identification of Natural Enemies of the Lebeck Mealybug

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Trash bug covered in Lebeck mealybug wax (photo credit: Eric Middleton)

Invasive insects can be particularly problematic in invaded ranges where they establish in the absence of predators, especially when they impact economically important commodities like citrus. Lebeck mealybug was first found causing damage to citrus groves in central Florida in 2019 and quickly spread around the region, causing concern for growers as the pest is hard to control and causes a lot of damage to fruit. From other impacted regions, we know that insecticide alone is unlikely enough to protect fruit and young trees

and in other countries sufficient natural enemies are present to keep the mealybug population low enough to cause minimal damage. The goal of this study is to determine what predators are currently present in Florida citrus that can help maintain the population below damaging levels with the long-term plan to incorporate both chemical control and natural enemies to support pest management needs throughout the citrus growing region.

Naturally occurring predators were collected from mealybug ovisac clusters. Some predators, like trash bugs and mealybug destroyer adults were visible feeding on the outside of clusters. Predators which fed inside ovisacs were allowed to complete development in the laboratory and identified once adults emerged. Predators found from this survey include mealybug destroyer adults and larvae, two species of predatory flies, trash bugs (lacewing larvae), a predatory caterpillar, and two species of parasitoids.

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