

# Ferrisia gilli, a new mealybug pest of pistachios

David Haviland

University of California Cooperative Extension, Kern Co.

## Introduction

*Ferrisia gilli* (Gilli mealybug) is a new pest of deciduous trees in California. It has been found in approximately 2,000 acres of pistachios in the San Joaquin and Sacramento valleys. It also infests almonds, grapes, stone fruits and likely a wide range of other deciduous trees and ornamental shrubs. Due to the rapid spread of this pest during the past few years it is important for growers statewide to develop and participate in programs to control this pest where it occurs and to prevent the continuance of its spread

## Identification

- Females have two stripes down their back
- Short lateral filaments
- Long glassy rods on the back
- Two white tails
- Pink-colored body
- Usually in aggregations



## Seasonal biology and damage

Gilli mealybug overwinter underneath the bark on the trunk and main scaffolds



During the late spring through harvest, mealybug are particularly fond of feeding within the cluster where they likely cause losses in quality and possibly yields. Late summer through early winter are the best times to survey orchards for this pest.



Limbs, leaves, and clusters in trees are often covered in honeydew and sooty mold



## Life Cycle

Adult females produce live offspring (no eggs)



Nymphs pass through several developmental stages called instars.

The first instar nymph is called a crawler



Immature males pupate and then emerge as winged adults



Immature females become wingless adults



Adult male



## Chemical control

Growers typically apply 1-2 applications of Imidan (phosmet) and or Sevin (carbaryl) annually to control Gilli mealybug. Research is underway to identify and register additional insecticides

Late spring is likely the best application timing.

Good coverage is essential to make the most of any insecticide application for this pest.



## Stopping the spread

Female mealybugs (which do not fly) are excellent hitchhikers. Rampant spread of this pest will continue until sanitation practices are in place to clean equipment leaving infested orchards.



There are particular concerns associated with harvest. At this time mealybug populations are at their highest, trees are sticky, lots of equipment is moving through orchards, and that equipment is typically moved locally from orchard to orchard and from county to county. Growers and harvesters should educate their equipment operators to recognize infested orchards and wash down equipment prior to leaving infested sites.

Tarping loads coming from infested orchards is needed to keep infested leaf trash from blowing out during transport.



Educating pruning and irrigation crews to look for, recognize, and report Gilli mealybug is an excellent way to survey orchards for early signs of infestation.



## Biological control

To date, biological control has not been seen in pistachios, probably due to pesticide programs that target true bugs and worms. In unsprayed almonds we have found multiple parasitoids and predators.