Pest Alert: Gill's Mealybug
Ferrisia gilli

IPPM Insect Pest Prevention & Management

Oregon Department of Agriculture

Introduction

Ferrisia gilli (Hemiptera: Pseudococcidae), also known as Gill's mealybug (GMB), is an emerging vineyard pest. It is believed to have originated in the southeastern US, but it was only identified from a complex of other similar species in 2003 using DNA techniques (Gullan et al. 2003). It is currently known from the southeastern US (AL, GA, and LA) and California. It has been in northern California since at least 1968 (Gullan et al. 2003). A population was found in Oregon for the first time in a vineyard during the summer of 2014 near Jacksonville in Jackson County, Oregon.

GMB feeds on a variety of plants including almond, catalpa, dogwood, grasses, holly, magnolia, nectarine, palm, persimmon, pistaccio, plum, and even poison ivy (Gullan et al. 2003). It is a pest of pistaccio, almonds, and grapes. As they feed, they produce sticky honeydew allowing sooty molds to develop on leaves and hindering photosynthesis. GMB may be able to transmit plant diseases. They can develop on grape clusters and cause them to be unsuitable for consumption. In one California study, up to 42% of grape clusters were infested with the mealybug in untreated plots, and there was significant damage on 11% of the clusters (UCCE 2014).

Dispersal

GMB can actively move around on plants, and nymphs may be passively dispersed by the wind. The wax on the nymphs and adults is sticky and can help carry immature and adult GMB to new areas on clothing or equipment. Vineyard workers traveling between California and Oregon could facilitate GMB's spread. Movement of live plants and plant cuttings could also transport GMB into Oregon.

It is important to note that pathways for this pest can also introduce vine mealybug, *Planococcus ficus*, which may be an even more serious vineyard pest. It has not been found in Oregon.

Adult Gill's mealybugs at base of branch. Photo: Kent M. Daane (University of California, Berkeley)

Description

GMB ranges from 2 to 5 mm in length (0.1 to 0.2 inches). They typically have numerous long, fine wax filaments described as glassy rods, a characteristic not found in other vineyard inhabiting mealybugs. The body under the wax is pink, and there are usually bare patches forming rows of spots or two stripes.

Damage to grape cluster. Photo: Lynn Wunderlich (University of California Cooperative Extension)

Pest Alert: Gill's Mealybug
Ferrisia gilli

Gill's mealybug under bark.
Photo: Lynn Wunderlich (University of California Cooperative Extension)

Life cycle

Two to three generations have been observed in California (Gullan *et al.* 2003, UCCE 2014). They overwinter as nymphs under bark, in crevices, and even several inches below the soil line; they have not been observed to feed during this time (Gullan *et al.* 2003). At bud break, overwintering nymphs migrate to the buds to feed (Haviland *et al.* 2006). Females do not lay eggs; they give 'birth' to crawlers (Haviland *et al* 2006). GMB may be tended by ants.

Prevention

The best way to keep GMB off of your crop is to use caution when contracting services for your vineyard. Make sure workers are aware of the signs of GMB and that they clean equipment and check clothing after visiting potentially infested areas. Infested equipment is the primary means of mealybug spread (Haviland *et al.* 2006). Make sure that grafting material is pest free. Bringing in plant stock from California or other infested areas is a substantial risk. Because of its wide host range, GMB may be moved on other plants, such as nursery stock.

Gill's mealybug at the base of shoot.
Lynn Wunderlich (University of California Cooperative Extension)

For more information:

If you think you have found GMB, please contact Josh Vlach: jvlach@oda.state.or.us or (503) 986-6458 or Robin Rosetta at Oregon State University Cooperative Extension: robin.rosetta@oregonstate.edu or (503) 678-1264 X67826.

Oregon Department of Agriculture
635 Capitol St. NE
Salem, OR 97301-2532
503-986-4636 or 1-800-525-0137
www.Oregon.gov/ODA

References

Gullan, P.J., D.A. Downie, and S.A. Steffan. 2003. A New Pest Species of the Mealybug Genus Ferrisia Fullaway (Hemiptera: Pseudococcidae) from the United States. Ann. Entomol. Soc. Am. 96(6):723-737

Haviland, D., R. Beede, K. Godfrey, and K. Daane. 2006. *Ferrisia gilli*: A New Mealybug Pest of Pistachios and Other Deciduous Crops. University of California Division of Agriculture and Natural Resources Publication 8207. 6 pages.

University of California Cooperative Extension (UCCE), Central Sierra. Gill's mealybug, *Ferrisia gilli.* Accessed October 16, 2014 http://cecentralsierra.ucanr.edu/Agriculture/Viticulture/Grape_Pests_Diseases/Mealybug_Information/

updated 07/2016