Pest Alert: Gill's mealybug
Ferrisia gilli

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 in 2003 using DNA techniques from a complex of other similar species (Gullan *et al.* 2003). It is currently known from the southeastern US (AL, GA, and LA) and California. It has been in California since at least 1968 (Gullan *et al.* 2003). A population was found in a vineyard during the summer of 2014 near Jacksonville in Jackson County, Oregon. Since then, the pest has spread at least 5 miles from the original site, although it is still only known from Jackson County.

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

PEST STATUS

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

WHAT CAN YOU DO?

If you think you have found GMB, please make a report to the ODA mealybug database at https://oda.fyi/mealybug or contact ODA entomologists at plant-entomologists@oda.oregon.gov or (503) 986-4636.

IDENTIFICATION

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.

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.

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HOW DOES IT MOVE?

GMB can actively move 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 could facilitate GMB's spread. Movement of live plants and plant cuttings could also transport GMB.

PREVENTION

The best way to keep GMB out of your crop is to use caution when entering 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. Ensure that stock acquired from California has been treated as required in Oregon's Grape Pests and Diseases Quarantine (ORS 603-052-0051). 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)

Damage to grape cluster (left) and Gill's mealybug under bark (right). Lynn Wunderlich (University of California Cooperative Extension)

REFERENCES

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MORE INFORMATION

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