
Plum Bud Gall Mite

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INTRODUCTION

The Plum Bud Gall Mite (*Acalitus phloeocoptes* (Nalepa)) has recently been discovered in Santa Clara County, California, and has the potential to infect economically important stone fruit crops. At the time of this writing, it is not clear how widespread this pest is in California. It has been found in Morgan Hill and Sunnyvale, and symptomatic plants have been reported in other cities in Santa Clara County.

Because these mites are microscopic, they are usually not noticeable until their feeding has produced galls (Fig. 1). In Europe and the Middle East, where the plum bud gall mite is primarily found, it has been reported on almond, apricot, peach, and plum trees.

IDENTIFICATION

Plum bud gall mites belong to the eriophyid mite family. The mites are tiny—typically 0.15 mm in length or less—and are difficult to see without magnification. They have wormlike bodies that are whitish in color (Fig. 2).

LIFE CYCLE

Adult females overwinter in galls and emerge in the spring, when galls crack open. Mites then migrate toward new buds and begin to feed. The mites' migration occurs at night. The presence of feeding mites leads to the formation of new galls around infested buds (Fig. 3). These galls enclose the recently-arrived mites and will expand to accommodate all of their descendants. Inside the gall, female mites lay one egg each day for 20-25 days. During the summer a new generation is produced about every three weeks, so that by the fall, when reproduction stops, a gall may contain between 4000 to 5000 mites.

Plum bud gall mites are primarily dispersed by wind, but can also be transmitted to new host trees by insects and birds, and by moving infected budwood.



Fig. 1. Infected bud galls in a Flavor Queen Pluot tree. Photo: Susan Casner-Kay

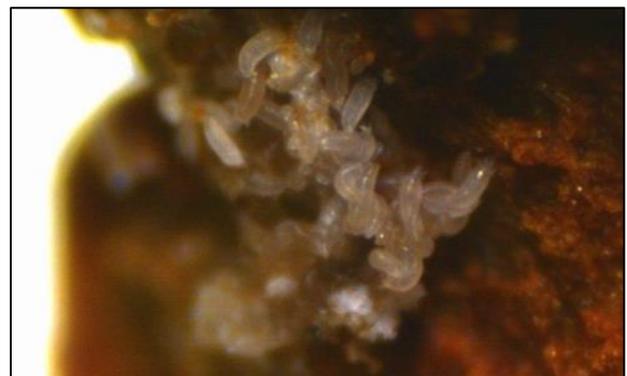


Fig. 2. Plum bud gall mites with a wormlike body and whitish color, as seen under microscope. Photo: Susan Casner-Kay

DAMAGE

The mites' feeding activity causes the formation of galls, which range in diameter from 1.3 to 1.8 mm, around buds on almond, apricot, plum, and



Fig. 3. Bud galls formed due to infestation by plum bud gall mites, as seen under a microscope. Photo: Susan Casner-Kay



Fig. 4. Flavor Queen Pluot tree with infested bud galls. Photo: Santa Clara County Department of Agriculture.

peach trees (Fig. 3). Mites may also lead to the deformation of fruit spurs (Fig. 4).

Reports have found that injury done by these mites can vary, depending on the tree host. Plum bud gall mite infestations have led to weakened trees, decreased yield, or, in some cases, the death of the tree. In other instances, trees have recovered from the mite attack, and some cultivars are known to be resistant to the mites.

WHAT TO DO

If you suspect that a tree at your home or in your commercial orchard is affected by the plum bud gall mite, please take one of the following actions:

- Contact your local county agriculture department. Inform them that you wish to report a Plum bud gall mite pest sighting. For the Santa Clara County Department of Agriculture, call 408-918-4600.
- Complete the California Department of Food and Agriculture (CDFA) "[Report a Pest Sighting Form](#)" online and submit via email to the CDFA Pest Hotline.
- Report a pest by calling the CDFA Pest Hotline at 1-800-491-1899.

For information on managing these mites, please consult "[UC IPM: UC Management Guidelines for Eriophyid Mites on Plum.](#)"

For further information about eriophyid mites, you can also refer to Utah State University's "[Eriophyid Mites – Utah Pests Fact Sheet.](#)"

REFERENCES

Castagnoli, M., and Oldfield, G.N. 1996. Other Fruit Trees and Nut Trees. Chapter in: Eriophyid Mites - Their Biology, Natural Enemies and Control, 543 - 559.

Jeppson, L.T., Keifer, H.H, and Baker, E.W. 1975. Mites Injurious to Economic Plants. University of California Press, 468-469.

Talhouk, A.S. 1977. Contribution to the knowledge of almond pests in East Mediterranean countries. Z. ang. Ent. 83, 248-257.

Vacante, V. 2016. The handbook of mites and economic plants. CAB International, 314-317.



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