



Grape Leaf Damage

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Many of us have a grape vine or two in our backyards. As the fruit on the vines starts to size and mature, we'll be watching our clusters more closely. Look for the skeletonizer and the blister mites on the leaves, not the fruit.

The Western Grapeleaf Skeletonizer has 3 generations per year in the Central Valley and the bluish black moths start to emerge from hibernating pupa in early spring to June. The female wing span is just over an inch and she flies around laying clusters of eggs on the underside of grape leaves.

After hatching, the larvae line up and start feeding side by side on the leaf underside. Young worms are cream colored, but older worms are quite distinct with 2 purple and several black bands on their yellow bodies. Reaching only one-half inch in size at maturity, worms crawl under the loose bark or into ground litter and spin a dirty, whitish cocoon to pupate. Then the cycle repeats.

Damage by these voracious critters is very obvious. The leaves disappear! Only a skeleton of a leaf remains after the feeding frenzy of the caterpillars. Skeletonizers first eat the undersurface of leaves, and then all leaf tissue between the main veins is eaten.

Solutions: In nature the caterpillars are attacked by naturally occurring parasites as well as by a virus disease. Applications of the "soft" insecticides spinosad or *Bacillus thuringiensis* are effective for controlling skeletonizers. Good spray coverage on undersides of leaves is essential.



Left photo: Female (left) and Male (right) Western Grapeleaf Skeletonizers

Right photo: Skeletonized leaves and mature caterpillars

Blister mites (Grape erineum mite)

If you notice raised bumps on the leaf surface or jagged blotches on the underside of your grape leaves then chances are you have blister mites, but good luck trying to see them. Adult mites are smaller than a speck of dust! Get out the magnifying glass and you'll discover that they are wormlike, light yellowish white, 0.2 mm long and one-fourth as wide. They have two pairs of legs and are much smaller than spider mites.



Erineum mites overwinter on the grape vines under bud scales and move to unfolding leaves in spring. They associate in small groups to feed on lower leaf surfaces; the result is production of a blisterlike area on the leaf. On the undersides of the leaves, beneath the swellings, is where the mite populations develop. As the population increases, some move to new areas or to other leaves. From mid-August to leaf drop, the mites move back to the bud scales to overwinter.

Damage: Young leaves show dark greenish or pinkish swellings on upper surfaces. Corresponding areas on lower surfaces are concave and densely lined with a felt-like mass of plant hairs, that later look like jagged necrotic blotches.

Solutions: Control is not necessary. Early leaf distortion can be tolerated with no resulting loss in grape yield. Blister mites cause aesthetic damage, but do not seriously harm grape vines. Prune and dispose of infested leaves. When mites are abundant, the most important actions are to conserve natural enemies and to provide proper cultural care to keep plants vigorous.

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