

Natter's Notes

Blister Mites: Grapes; Pears; and Walnuts

Jean R. Natter

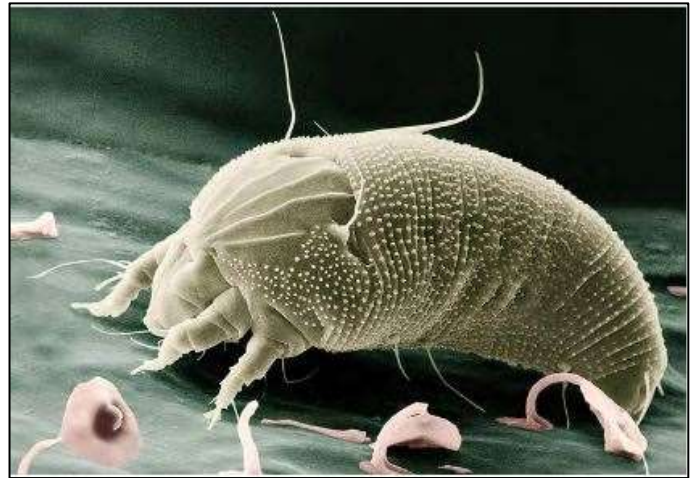
Blister mites are running wild this season. It seems that the perfect conditions combined for population explosions of these tiny, elongated mites which noticeably disfigure the leaves of grapes, pears, walnuts, and more. Among pears, even newly planted trees are victims. The symptoms are similar on all three genera but the specific causal agents – also referred to as eriophyid mites or simply eriophyids – vary.

Blister or eriophyid mites reside on the undersides of the leaves, injecting fluids into the leaf tissue as they feed. Those fluids cause the blistering on the top surface with the associated white “fuzz” (enlarged plant hairs) in the concave areas on the reverse. (So, no, it’s not fungal growth.)

Blister mites are far different than the more common spider mites. Adults are microscopic, light in color, cylindrical, tapered at the posterior end, with two pairs of short legs just behind the head. Nymphs are the same but are smaller.

Grape Erineum Mites (*Colomerus vitis*) are microscopic, wormlike, with 2 short pairs of legs at the head end, and white-yellow in color. They overwinter between the outer bud scales and bud tissue and feed on leaves during spring and summer. Feeding from the undersides of the leaves produces a blistered appearance on the top of the leaves. At the same time, the corresponding depressions on the underside are filled with enlarged light-colored leaf hairs which shelter the mites from natural enemies and pesticides. In spite of how extensive and nasty-looking the infestation is, blister mites seldom affect grape health or production.

As the season progresses, the enlarged leaf hairs progress from white to yellow and, finally, brown. Then, from mid-August until leaf drop, the mites return to their overwintering sites beneath the bud scales.



Microscopic image of an erineum mite, *Aceria* species, elongated, two pair of legs, size about approximately 1/100-inch. (<https://utahpests.usu.edu/upddl/files-ou/factsheet/eriophyid-mites2010.pdf>)

Home management for grape erineum mites: Sprays aren’t needed. “Dormant-season oils and insecticides used for other pests and sulfur applications for powdery mildew usually control this pest.”

Pear Leaf Blister Mites (*Eriophyes pyri*) feeding causes reddish to yellowish green blisters on the top surface of the leaves, often in 2 lengthwise rows, one at each side of the main vein. With time, the blisters turn brown or black. Leaves may drop prematurely. Loss of excess foliage weakens trees, reduces shoot growth, and interferes with fruit maturation and fruit bud formation. Feeding on fruit causes irregular, russeted spots which feel rough and somewhat scaly. PNW Insect says “Eriophyid mites move from tree to tree, perhaps by wind or carried on birds or insects.”

Home Management for Pear Leaf Blister Mites: Lime sulfur applications in the fall can significantly reduce populations of these mites the following year. (The trick, though is to obtain it in small packaging for home-use.) Applications before bud swell can also be effective. Or apply superior oil as buds begin to swell.

Walnut Blister Mites (*Aceria erineus*)

Just as do the previous two mites, walnut blister mites overwinter beneath bud scales. When springtime temperatures rise, the mites feed among the leaf hairs on the undersides of the leaves. Several generations

occur during the summer, which attack new foliage as soon as it unfurls.

Home Management of Walnut Blister Mites: Naturally-occurring predator mites almost always keep mites under control if broad-spectrum insecticide applications are avoided. Heavy rain and cold weather also suppress mite numbers.

Broadleaf weeds like mallow, bindweed, white clover, and knotweed enhance mite numbers. Avoid excessive nitrogen applications, as this encourages mites.

Horticultural oil is the only spray suggested for home-use.

Resources

Eriophyid Mites: <https://utahpests.usu.edu/upddl/files-ou/factsheet/eriophyid-mites2010.pdf>

Grape Erineum Mites:

<https://pnwhandbooks.org/insect/small-fruit/grape/grape-grape-erineum-mite>

Pear Leaf Blister Mites:

<https://pnwhandbooks.org/insect/tree-fruit/pear/pear-eriophyid-mite>

Walnut Blister Mites:

<https://pnwhandbooks.org/insect/nut/walnut/walnut-walnut-blister-mite>



Damage from Pear leaf blister mites is often in 2 rows, each side of midvein; Damage first appears as yellowish spots on the top of leaves; but gradually change then, later becomes brown latter in the season. (Client image; Multnomah Co; 2016)



Erineum mite damage on home garden 'Interlaken' grape leaves: "Blisters" on the top surface with corresponding concave areas on reverse filled with white fuzzy material which is enlarged leaf hairs. (J.R. Natter; 2016-04)



Erineum mite galls (*Aceria erineae*) on *Juglans californica*; Blisters on top surface of leaflets; on the reverse, fuzzy white material in corresponding concave areas on reverse is enlarged leaf hairs, not fungal growth. (Client image; <https://bugguide.net/node/view/1373756/bgimage>.)