

Forest Insect & Disease Bulletin

Arizona State Forestry Division

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Aphids

(Hemiptera: Aphididae)

A number of aphids or plant lice feed on conifers and hardwood species. They cause various types of damage, including discoloration and deformation of mainly foliage and twigs.

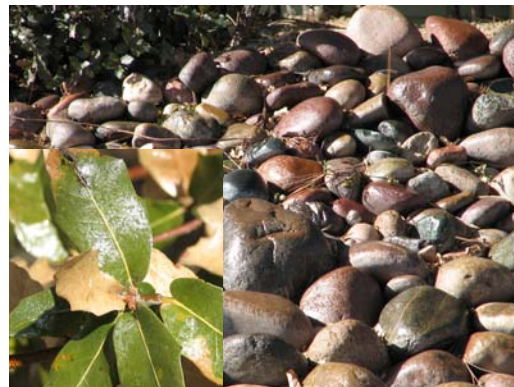
Premature foliage drop, reduction of new growth, sticky excretions and possible mortality of the infested host may occur. Most of the aphid activity noted in the state has been seen below the Mogollon Rim in the communities of Payson and Prescott, mainly on oaks and ponderosa pine, and usually in spring or late fall.

Injury:

Aphids are sapsucking insects which cause a general weakening of the plant parts they feed on. Their piercing mouthparts penetrate foliage, twigs, and branches to remove the sap. Not all of the sap is utilized and the excess liquid is expelled as “honeydew”. The honeydew consists mainly of



excess sugars and waste



materials. When large quantities of honeydew are excreted, it may appear as a mist falling from the trees. This honeydew often spots or forms a glistening coat on the foliage, cars, and other objects located below. On

foliage, this substance can become a medium on which black “sooty-mold fungus” grows.

Occasionally, this mold completely covers the foliage and branches so that they appear black,

as if sprayed with black paint. An additional symptom which has been described as “Icing” has been noted recently on pines. Heavy exudation of milky resin can be found mainly around the base of infested needles. And often the aphids can be found entangled in the pine resin.

Description:

Aphids are small, globular appearing and occur in groups. They are sluggish, soft-bodied insects,



winged or wingless when mature, and 1/8 to 1/4 inch long; colored variously, yellow, red, green, gray, blue, or black.



Winged forms have two pairs of delicate membranous wings usually held roof-like over their body. These insects frequently have a pair of tube-like structures located on their posterior. Nymphs (immature aphids) resemble adults in most characteristics except size, always lack wings, and are sexually immature.

Life Cycle:

Some aphids have a relatively simple life cycle: eggs, nymphs and adults; whereas, others have a very complex type of development which includes asexual reproduction and live births. And multiple generations are common for this insect. They are most abundant during the spring months, but large fall populations are not unusual. And most species overwinter in the egg stage.

Natural Control:

Aphid populations are often held in check by natural enemies, including insect predators such as lady beetles, lacewings and fly larvae (maggots) and various parasitic wasps. The artificial introduction of lady beetles and other beneficial insects, to augment those already present, may be helpful. But the ability of aphids to produce multiple generations usually overwhelms



their natural enemies. Also ants can be found tending aphids and feeding on the honeydew, and will attack their natural enemies.

Mechanical Control:

If the plants are small enough, a strong stream of water (to force the aphids off the foliage) can be useful. Hosing with a high pressure hose may also remove the sticky honeydew.

Chemical Control:

Insecticide application should be avoided or delayed if beneficial predators or parasites are active. Also damage to the plant may not be serious enough to warrant chemical application. Insecticides labeled for aphids are available and also horticultural oils and insecticidal soaps, which are safer to apply. The timing of the spray is not critical, as long as the insect is sprayed directly.

CAUTION: Pesticides used improperly can be injurious to people, plants and animals. Follow directions and heed all precautions on the labels.

WARNING: Recommendations for use of pesticides are reviewed regularly. The registrations on all suggested uses of pesticides in this publication were in effect at the time of printing. Check with Arizona Department of Agriculture, County Extension Service, State or Federal Forester to determine if these recommendations are still current.

To learn more about Aphids, reference the following links:

<http://aces.nmsu.edu/ces/plantclinic/documents/o-01-aphids.pdf>

<http://www.ext.colostate.edu/pubs/insect/05511.pdf>

http://www.fs.usda.gov/Internet/FSE_DOCUMENTS/stelprdb5350725.pdf

For further information and technical assistance with your forest health concerns, contact:

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