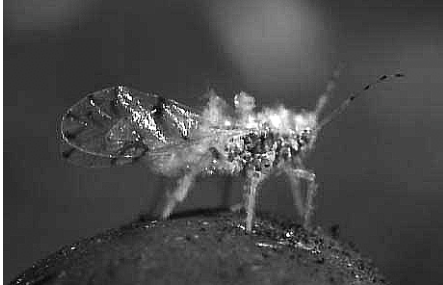




Asian Woolly Hackberry Aphid

This aphid showed up on Chinese hackberry trees in Davis and other Sacramento Valley cities in 2002. First found in Florida and Georgia in the late 1990's, it has spread rapidly across the south and into California. The fuzzy white insects, which are found on the tops and bottoms of the leaves, cause the leaves to drip sticky liquid all over everything beneath them. This sugar excretion draws ants, and a black mold may grow on surfaces covered with it. Even very large populations of aphids don't seem to weaken or stress the trees, but the amount of sticky goop is a major nuisance.



Two products containing imidacloprid (Merit®) are available. Although they are not labeled for this pest, systemic insecticides give the most effective control. One is applied as an injection; you drill small holes in the trunk and squeeze the pesticide in. The other is mixed in a bucket of water and poured around the trunk. Both materials will take several weeks to get into the plant and kill the aphids. A salesman from Bayer told us it travels up the tree at the rate of 1' a day. Beneficial insects, especially lacewings and including ladybird beetles, establish populations on infested trees, so some level of control may occur naturally. You can learn to recognize the distinctive eggs of lacewings, the larva and pupa stages of "ladybugs," and leatherwing beetles. But don't expect them to eat enough aphids to prevent the sticky excretion. If you choose not to treat the

trees, you'll have a sticky layer all around the trees, very heavily from April through May, at an annoying level through the summer, and probably heavily again in the fall.

• **Frequently asked questions:**

What is the application method and rate?

The drench (Bayer Advanced Garden™ Tree & Shrub Insect Control) is mixed in a bucket of water and poured around the trunk of the tree at the rate of 1 oz. per inch of circumference, measured at about your chest height on the tree. This is most easily measured with a soft measuring tape. But if for some reason you are estimating from the diameter, remember that circumference = $\pi \times$ diameter. If your tree has multiple trunks, measure their circumferences, add them together, and multiply by 0.75. It may seem odd to just pour the systemic around the trunk of a large tree and expect it to get up into the leaves. But the tree has enough feeder roots there to absorb it. You can apply it further out in the 'drip line' of the tree; it will take a little longer to get up to the leaves as it travels through the larger roots first. People who applied it to just one side of the tree reported variable results. The injectable product (Monterey Chemical Pointer™ Tree Injection) is squeezed into 3/8" diameter holes drilled about 1/2" into the trunk, at 4" - 6" intervals, about 4' above the ground. UC Extension is recommending against this product because of the risk of spreading a disease from one tree to another on the drill bit. We have had mixed feedback on Pointer™. If you drill too deep the chemical may not get into the plant's xylem. But for trees with limited soil application area, the injection may be more practical than the drench.

• **When should it be applied?**

It takes 30 - 45 days to get up into the tree, so March applications should get it there before the aphids get severe. It is soluble, so we're concerned that early applications followed by heavy rain, could move much of it out of the root zone. Treatments in April and May in the 2003 and 2004 seasons gave adequate results as well.

• **Should it be reapplied in the fall?**

So far, that doesn't seem necessary. The manufacturer states '12-Month protection'. But trees in heavily infested neighborhoods had minor outbreaks in the early fall leading to sticky leaf drop. If you had this problem an August application could prevent it.

• **Is there an organic alternative?**

Not for large trees. Spraying smaller trees with insecticidal soap will kill some aphids and rinse off the goop (actually, it is water soluble so just hosing it off will rinse it off). But with thousands of aphids present surfaces will just be covered again within a day or so. Ultra-fine oil sprays will kill more aphids than soap, but spraying larger trees is impractical. Natural enemies will probably give some level of control eventually, but releasing ladybugs isn't effective.

• **What if my neighbor doesn't treat?**

Aphids will fly from his tree to yours, feed, and die. It isn't likely to significantly increase the sticky mess you deal with, because they won't have time to reproduce.

• **How toxic is Merit®, and how does it work?**

The Caution label on the Bayer drench indicates the lowest level of pesticide toxicity. Pointer is more concentrated, so it has a Warning label (the next level of toxicity). See each label's Precautionary Statements for specific hazards. Related to nicotine, it kills in much the same way by interfering with a nerve pathway. It is selectively more toxic to insects than to other animals, and the spray is toxic to bees (but not when applied as a soil drench or injection). It is moderately toxic to people, persists in the soil for several weeks, but doesn't pose much risk of contaminating ground water. It is much less toxic than the old systemic used on roses (di-syston). Don't apply any systemic insecticides to or near food-bearing plants unless they are specifically on the label. It is systemic in plants—i.e., it moves in through the roots and stems to the leaves in the sap of the plant where it is sucked out by aphids, scale, and other sucking insects. It also may kill some insects which bore through the sap into the trunk.