Bugs & Blights

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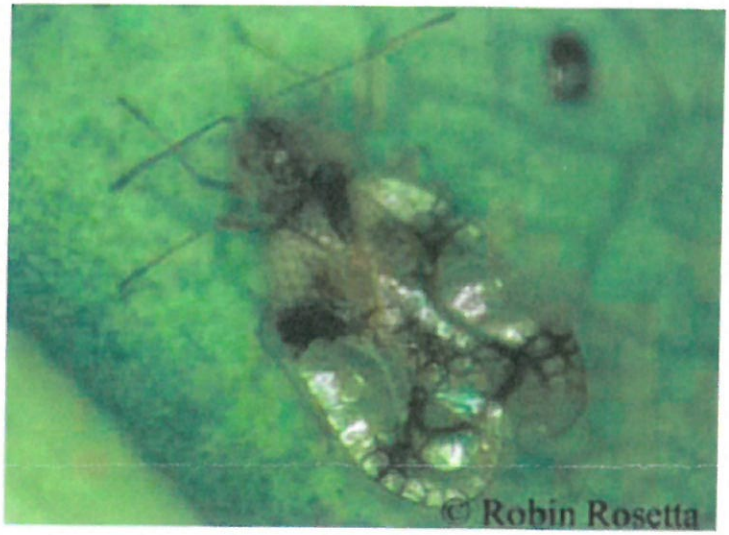
RHODODENDRON LACE BUG. PHOTO PROVIDED BY SHARON COLLMAN.



AZALEA LACE BUG. PHOTO BY ROBIN ROSETTA, OSU

Lace bugs

Lace bugs have been terrorizing gardeners for far too long. It's time to put a stop to it! They are bugs and we are not. We are the big brains. We should be able to handle this.

So, who are these tiny terrors of the garden that cause people to dig out their favorite azaleas and rhododendrons? The same ones that bleach out leaves and leave sticky "tar spots" on the under sides of the leaves?
(See: http://ir.library.oregonstate.edu/xmlui/bitstream/handle/1957/40424/em9066.pdf)

What is a lace bug?

Lace bugs are sucking insects belonging to the family Tingidae, in the order of true bugs, Hemiptera. There are "bugs" that make us sick, "bugs" that plague our computers and true bugs in the suborder Heteroptera. There are two lace bug species that attack rhododendrons and azaleas. The rhododendron lace bug has been here for years and occasionally causes serious damage to rhododendrons, especially those on dry sites or in the sun. The Azalea lace bug, however, is a newcomer that arrived in Washington in 2008 and is a much bigger problem on both azaleas and rhododendrons.

What do they do to plants?

Lace bugs suck the cell contents from leaves. When the chlorophyll and other cell contents are removed, the empty cells become yellow or white. Over the summer, these leaves become bleached out. On the underside of the leaves, where the insects feed, there are molted skins, and black tar-like excrement, which is distinct and diagnostic for these insects. They can become so numerous that the entire plant is bleached white.

What is their life cycle? Can we exploit their weaknesses?

Eggs are laid along the veins on the undersides of leaves, and covered with a brown paste of excrement. They hatch in late May and begin to grow through several molts. Larvae are clear and spikey with black markings. The adults have clear wings with faint black veins and smoky dark markings between the veins. The wings lie flat along the back and the thorax is raised, when viewed from the side. The rhododendron lace bug has but one generation per year, while the azalea lace bug has multiple generations per year, allowing it to build its numbers and accumulate a lot of damage during the summer.

How do we control them?

These insects should be fairly easy to control, provided that one starts early in the season to kill the first generation, before it can lay eggs of subsequent generations.

1. Inspect the undersides of leaves to determine if the lace bug stages are present. Use a clipboard with white paper under suspect areas, and strike sharply with enough force to dislodge lace bugs, but not enough to damage the plant. The life stages will be evident. Adults have wings and nymphs are spikey little devils. You can also look on the new growth for new little feeding specks of yellow.

2. Observe if any natural enemies are present: i.e. green lacewing larvae, ladybugs and larvae, or others. Research has shown that green lacewing, of the family Chrysopidae and order Neuroptera, released among plants, reduce the numbers of lace bugs.

3. If no natural enemies are present, select a pesticide that is the least toxic for you (the applicator) and nearby environment (ditches, ponds with fish, etc.) Pesticides must reach the adults and larvae on the undersides of leaves. See Hortsense for a list of products registered for the host plant and sucking insects (lace bug may not be on the label but the product can be used if the host is on the label and you have reason to believe it will work.

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4. "BEE" cautious. Don't apply your pesticide to blooms on, or under, affected plants. Mix only enough pesticide for the target plants, thereby helping to save our bee populations!

5. Plants face out to the sun, so, if possible, apply pesticide/product from the backside of the plant, to get good coverage of the undersides of the leaves.

6. Hortsense lists a number of products registered in Washington State that are effective against lace bugs, as well as some IPM alternatives. http://pep.wsu.edu/hortsense/scripts/query/displayProblem.asp?tableName=plant&problemID=782&categoryID=1 or the PNW Insect Management Handbook (and online version: http://insect.pnwhandbooks.org/hort/landscape/hosts-and-pests/azalea-rhododendron-azalea-and-rhododendron-lace-bug . The online version of Grow Safe Grow Smart will provide information on the relative safety of registered pesticide brands. http://www.growsmartgrowsafe.org/

7. Target the pest, protect the rest. Rhododendron leafhoppers.
You may have also noticed leafhoppers, which have red stripes on green wing covers, on your rhododendron. Unless they are really numerous, I've not seen any significant damage to rhododendrons, or other plants they may be found on. Leafhoppers, in general, suck the contents out of the plant cells of leaves, which causes a little yellow spot or stipple. You can assess the damage by looking for stippling on the upper surface of the leaf. However if lace bug is present, controlling lace bug should also impact the leafhoppers.