Azalea & Rhododendron Insect Pests

While many people think of azaleas and rhododendrons as being completely different kinds of plants, they actually belong to the same genus, *Rhododendron*. In terms of the pests that attack these plants, some occur on both azaleas and rhododendrons, but some attack only one or the other. Azaleas and rhododendrons should be inspected regularly for insects and mites. If detected early, before pest numbers reach high levels, homeowners often can physically remove the pests. In addition, when pests are immature and few in number, the less toxic pesticides such as insecticidal soaps and horticultural oils are often effective at controlling them.

Some common insect and related pests of azaleas and rhododendrons in South Carolina are described below.

**Lace Bugs**


**Azalea Lace Bug**: Azalea lace bug (*Stephanitis pyrioides*) is a major pest of azaleas in South Carolina. Lace bug adults are about ⅛ inch long. The wings are highly sculptured, giving them a lacy appearance. The adults also have some dark markings on the back and wings. Their markings make them difficult to see when on the leaf. The immature forms, called nymphs, are colorless initially but turn black over time. The nymphs have a number of spines on their back.

Both adults and nymphs have needle-like mouthparts that they use to suck plant sap from the leaf’s underside. As a result of the feeding damage, leaves develop pale colored speckling (stippling) on their upper surfaces, giving leaves a grayish cast. When damage is severe enough, the whole leaf appears white and drops early. This early leaf drop can make the azalea susceptible to some of the dieback diseases. As a result of their feeding on the underside of the leaf, most people do not see lace bugs until damage is visible. Black shiny bits of insect waste and cast off skins from immature forms also can be found on the undersides of leaves.

Old lace bug injury with healthy new growth
Whitney Cranshaw, Colorado State University, www.forestryimages.org
Lace bugs overwinter (survive the winter) as eggs. Adult female lace bugs insert their eggs into the leaf tissue and then cover them with a dark splotch of a varnish-like material to seal the egg into the leaf. This, along with their droppings, gives the underside of the leaves a "fly-specked" appearance. There are usually three or more generations of this pest in South Carolina each year.

**Control:** Control of this pest on azalea begins with the planting of resistant varieties. The following azalea cultivars have resistance to azalea lace bug: ‘Dawn,’ ‘Pink Star,’ ‘Ereka,’ ‘Cavalier,’ ‘Pink Fancy,’ ‘Dram,’ ‘Seigei,’ ‘Macrantha,’ ‘Salmon Pink,’ ‘Elsie Lee,’ ‘Red Wing,’ ‘Sunglow’ and ‘Marilee.’

Lace bugs have several natural enemies that feed on them. These include lacewings, assassin bugs, spiders and predaceous mites. However, when lace bug populations get out of hand, using chemical controls is necessary. Insecticidal soaps may give some control of young lace bugs, and complete coverage of all leaf surfaces is essential. For adult lace bugs, recommended spray insecticides include acephate, bifenthrin, lambda cyhalothrin, malathion, carbaryl, and cyfluthrin. Acephate may give the best control, as this insecticide is a foliar systemic that will move through the leaves to kill the lace bugs on the undersides of the leaves. The other insecticides are contact insecticides, and sprays need to be directed onto the lower surface of the foliage to be effective. Azaleas should be sprayed when the first lace bugs appear. A second application in seven to ten days may be needed to control newly hatched lace bugs. Good control of the first generation in March to May will greatly reduce problems later in the season. Control of second (July to August) and later generations (September to October) may be necessary.

As an alternative to spraying the azaleas, products containing either imidacloprid or dinotefuran may be used as a soil application around the base of the shrubs. The amount to apply is based upon the height of the shrubs. The shrubs are then watered to enhance the uptake of the product. The advantage to these soil applied products is that they give season-long control of lace bugs. See Table 1 for products. As with all pesticides, read and follow all label directions and precautions.

**Rhododendron Lace Bug:** Rhododendron lace bug (*Stephanitis rhododendri*) adults are slightly larger than azalea lace bugs, and they are yellow. Their nymphs are similar in color, but are slightly larger than azalea lace bug nymphs.

Feeding behavior by the rhododendron lace bugs is the same as with azalea lace bugs, and the symptoms that are produced are similar.

**Control:** Rhododendron lace bugs should be treated when they appear in early May. Repeat sprays as needed. Recommended insecticides to control the Rhododendron lace bug are the same as for the azalea lace bug. As with all pesticides, read and follow all label directions and precautions.

**Mites**

Spider mites are not insects but are more closely related to spiders. Mites, such as azalea mite (*Eotetranychus clitus*) and southern red mite (*Oligonychus ilicis*) are a common problem on azaleas, but can also attack rhododendrons. They are very small and barely visible to the naked eye. Spider mites are typically found on the undersides of leaves although with heavy infestations they will feed on the upper surface also. Mites suck plant sap causing leaves to change from their normal green color to dull green and with a heavy infestation to a gray-green or bronze-green color. With heavy infestations, leaves may also be covered with fine webbing.

The southern red mite is a "cool weather mite," meaning it is active in spring and fall and almost inactive during the summer and winter. However, some species of spider mites develop most rapidly in dry, warm (temperatures greater than 70 °F) weather, and their population peaks in midsummer.
Southern red mites, eggs and cast off skins.
John A. Weidhass, Virginia Polytechnic Institute and State University, www.forestryimages.org

An easy way to detect spider mites is to take a white sheet of paper and wipe the undersides of several leaves. If mites are present, there will be red streaks on the paper.

Control: Natural enemies of mites, such as ladybird beetles (ladybugs), thrips and predaceous mites usually keep mite populations reduced. While pesticides are available, their misuse often makes the problem worse by killing off the mites’ natural enemies. If the population level is low, early season mite infestations can often be controlled with insecticidal soap or horticultural oil sprays. Insecticidal soaps and horticultural oils offer no residual activity and help to conserve beneficial insect species. Test insecticidal soap on azalea varieties before applying to all plants. It is best to spray insecticidal soap or horticultural oil when the temperatures are between 45 and 85 degrees, and spray in the evening. Thorough coverage of both the tops and bottoms of leaves is important for best control. Apply horticultural oil sprays at a 2% solution (5 tablespoons oil per gallon of water).

A recommended miticide for use on azaleas is taufluvalinate. It is best to alternate the miticides that you use to decrease the chance of mites developing resistance. An alternate insecticide with miticidal activity is bifenthrin.

If mites have been a problem on azaleas, do not use carbaryl sprays or imidacloprid soil drenches to control other pests. Their continued use may cause a subsequent spidermite outbreak. See Table 1 for products. As with all pesticides, read and follow all label directions and precautions.

Scales

Various scales attack azaleas and rhododendrons, but one of the most common is azalea bark scale (Eriococcus azaleae). Scales are unusual insects. They vary in appearance depending on age, sex, and species. The adult female azalea bark scale is dark red with a long sucking mouthpart. It is hidden from view by the matted waxy threads of the egg sac that covers it. The egg sac is about 1/8 inch in length. Adult females are immobile and can usually be found feeding in the forks of branches and on twigs. The nymphs (immature forms called crawlers) move around for a short before they settle and start feeding. Both adults and crawlers suck plant sap.

Control: A light infestation of scale can be scraped off the plant and discarded, or heavily infested branches may be pruned out. A horticultural oil spray applied in early spring before new foliar growth begins will kill many over-wintering adults and eggs by smothering them. Spraying horticultural oil during the growing season will help control crawlers, as well as adults and eggs. Apply horticultural oil sprays at a 2% solution (5 tablespoons oil per gallon of water). Spray the plants thoroughly, so that the oil spray drips or "runs off" from the upper and under sides of leaves, twigs, and plant stems.

Contact insecticides are only effective against crawlers. Recommended insecticides that are available in homeowner size packaging include acephate, bifenthrin, lambda cyhalothrin, malathion, carbaryl and cyfluthrin. See Table 1 for products. As with all pesticides, read and follow all label directions and precautions.
Red-Headed Azalea Caterpillar
The red-headed azalea caterpillar (*Datana major*) is the larva (immature form) of a moth. At about 3/8 inch long, the caterpillar is reddish- to brownish-black with white and yellow stripes. When mature, the caterpillar reaches 2 inches in length and is almost black with a red head and legs and with white broken longitudinal lines running along the body.

A group of red-headed azalea caterpillars devouring a leaf.
Chris Evans, River to River CWMA, www.forestryimages.org

Red-headed azalea caterpillars feed in groups and may defoliate much of an azalea before they are detected. When disturbed, they raise their heads and tails. Most of the damage is done in late summer.

Control: The caterpillars can be removed by hand as they are harmless to humans. For chemical control, treat when caterpillars are first noticed. Recommended insecticides that are available in homeowner size packaging include *B.t.*, spinosad, bifenthrin, lambda cyhalothrin, permethrin, acephate, carbaryl and cyfluthrin. Spinosad and *B.t.* will more effectively control younger caterpillars. If the caterpillars are large, choose one of the other contact insecticides. See Table 1 for products. As with all pesticides, read and follow all label instructions and precautions.

Rhododendron Borer
The rhododendron borer (*Synanthedon rhododendri*) is mainly a pest of rhododendrons but does attack azaleas. The borer is the immature form (caterpillar) of the rhododendron borer moth. The adult is a clearwing moth that somewhat resembles a wasp. The adult female lays eggs on the bark of the plant. The borer is pale yellow with a dark head and about ½ inch long. It chews a hole to the inner bark and forms long tunnels in the branches. By late fall, it enters the sapwood where it survives the winter.

The rhododendron borer prefers twigs and small branches, but may infest main stems and branches as well. Leaves on infested branches are often off-color and wilted. Early symptoms are similar to those resulting from drought stress. In addition, infested branches tend to be somewhat stunted compared to healthy branches. Heavily infested branches turn brown and die. Damage from this pest is most evident in the fall.

To detect this borer, prune wilted branches and cut them open to see if the borers are present. There are also pheromone (insect chemical attractants) traps that are available. These traps attract only the adult males. The presence of male adults indicates the need for control measures to be taken.

Control: Nonchemical control is limited to pruning and destroying wilted branches. Chemical control with permethrin will protect trunks and limbs from the borer larvae. Treatment should take place in May and June. Thoroughly spray bark and repeat three times at 10 to 14 day intervals. See Table 1 for products. As with all pesticides, read and follow all label instructions and precautions.
<table>
<thead>
<tr>
<th>Pesticide Active Ingredient</th>
<th>Brand Names &amp; Products</th>
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<tbody>
<tr>
<td><strong>Acephate</strong></td>
<td>Bonide Systemic Insect Control Concentrate</td>
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| **Bifenthrin**             | Bifen I/T Concentrate  
                            | Ferti-lome Broad Spectrum Insecticide Concentrate  
                            | Hi-Yield Bug Blaster Bifenthrin 2.4 Concentrate  
                            | Ortho Bug-B-Gon Insect Killer for Lawns & Gardens Conc.; & RTS |
| **B.t. (Bacillus thuringiensis)** | American Brand Thuricide Concentrate  
                                | Bonide Thuricide Bt Concentrate  
                                | Hi-Yield Thuricide Concentrate  
                                | Safer Caterpillar Killer with Bt Concentrate  
                                | Southern Ag Thuricide Bt Caterpillar Control Concentrate  
                                | Tiger Brand Worm Killer Concentrate |
| **Carbaryl**               | Ferti-lome Liquid Carbaryl Garden Spray Concentrate  
                            | Garden Tech Sevin Concentrate Bug Killer Concentrate; & RTS |
| **Cyfluthrin**             | Bayer Advanced Vegetable & Garden Insect Spray Concentrate; & RTS |
| **Dinotefuran**            | Gordon’s Zylam Liquid Systemic Insecticide (drench)  
                            | Gordon’s Zylam 20SG Systemic Turf Insecticide  
                            | Ortho Tree & Shrub Insect Control Ready to Use Granules (2%)  
                            | Valent Brand Safari 2G Insecticide (2% granules)  
                            | Valent Brand Safari 20SG Insecticide |
| **Horticultural oil**      | Ferti-lome Horticultural Oil Spray Concentrate  
                            | Bonide All Seasons Spray Oil Concentrate  
                            | Southern Ag ParaFine Horticultural Oil Concentrate  
                            | Espoma Earth-tone Horticultural Oil Concentrate; & RTS |
| **Imidaclorpid**           | Bayer Advanced Garden Tree & Shrub Insect Control Landscape Formula Concentrate (drench)  
                            | Bonide Annual Tree & Shrub Insect Control w/ Systemaxx (drench)  
                            | Ferti-lome Tree & Shrub Systemic Insect Drench  
                            | Gordon’s Tree & Shrub Insect Killer (drench)  
                            | Hi-Yield Systemic Insect Spray (drench)  
                            | Monterey Once A Year Insect Control II (drench)  
                            | Ortho Bug B Gon Year Long Tree & Shrub Insect Control (drench) |
| **Insecticidal soap**      | Bonide Insecticidal Soap Concentrate  
                            | Espoma Earth-tone Insecticidal Soap Concentrate  
                            | Natural Guard Insecticidal Soap Concentrate  
                            | Safer Brand Insect Killing Soap Concentrate  
                            | Schultz Garden Safe Insecticidal Soap Insect Killer Concentrate |
| **Lambda or gamma cyhalothrin** | Spectracide Triazicide Insect Killer - Lawns & Landscapes Conc.; & RTS |
|                            | Bonide Beetle Killer RTS |
|                            | Bonide Caterpillar Killer RTS |
| **Malathion**              | Spectracide Malathion Insect Spray Concentrate  
                            | Southern Ag Malathion 50% EC  
                            | Hi-Yield 55% Malathion Insect Spray Concentrate  
                            | Ortho Max Malathion Insect Spray Concentrate  
                            | Tiger Brand 50% Malathion Concentrate  
<pre><code>                        | Gordon’s Malathion 50% Spray Concentrate |
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<table>
<thead>
<tr>
<th>Pesticide Type</th>
<th>Products</th>
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<tbody>
<tr>
<td>Bonide Malathion Insect Control 50% Concentrate</td>
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<td>Martin’s Malathion 50% Concentrate</td>
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<td>Permethrin</td>
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<td>Bonide Eight Insect Control Vegetable, Fruit &amp; Flower Concentrate</td>
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<td>Bonide Total Pest Control Outdoor Concentrate</td>
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<td>Hi-Yield Indoor/Outdoor Broad Use Insecticide Concentrate</td>
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<td>Bonide Eight Yard &amp; Garden RTS¹</td>
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<td>Spinosad</td>
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<td>Southern Ag Conserve Naturalyte Insect Control Concentrate</td>
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<td>Bonide Colorado Potato Beetle Beater Concentrate</td>
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<tr>
<td>Bonide Captain Jack’s Dead Bug Brew Concentrate; &amp; RTS¹</td>
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<td>Ferti-lome Borer, Bagworm &amp; Leafminer Spray Concentrate</td>
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<td>Monterey Garden Insect Spray Concentrate</td>
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<td>Natural Guard Spinosad Bagworm, Tent Caterpillar, &amp; Chewing Insect Control Concentrate; &amp; RTS¹</td>
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<td>Tau-fluvalinate</td>
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<tr>
<td>Bayer Advanced 3-in-1 Insect, Disease &amp; Mite Control Conc.; &amp; RTS¹</td>
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1. RTS = Ready to Spray (hose-end applicator)
2. RTU = Ready to Use (pre-mixed spray bottle)
3. Drench = Add to water and pour around base of plant.
4. Do not apply oil sprays when the temperature is above 90 °F or to drought-stressed plants. Spray late in the day.
5. Do not apply soap sprays when the temperature is above 90 °F or to drought-stressed plants. Spray late in the day.

**With all pesticides, read and follow all label instructions and precautions.**

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