



Lace Bugs

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Introduction

Adult lace bugs measure 3-6 mm (0.12-0.25 inch) long and have a sculptured, netted appearance (Fig. 1). The body often has brown, black, or tan markings. The immature stages, called nymphs, are smaller, lack wings, and often have erect spines (Fig. 2). Nymphs often have a different coloration than the adults (Fig. 2). The eggs are small, but are easily recognized by their elongated, cylindrical shape, resembling black chimneys attached to the undersides of leaves (Fig. 1). Lace bugs belong to the family Tingidae in the order Hemiptera.



Figure 1. An adult lace bug standing over a clutch of eggs (David Cappaert, Bugwood.org).

Life History

Adult lace bugs on deciduous plants overwinter in protected bark crevices and branch crotches on the host, or on the ground in leaf litter. They become active in the spring just as the host resumes plant growth. They attach their eggs to the undersides of leaves, often along the midribs, and sometimes covering them with a black varnish-like coating. The eggs stay attached to the leaves long after the nymphs have hatched. The nymphs develop quickly.

One to several generations can occur in one season; usually there are two generations. Some lace bugs can complete a generation in as few as 30 days. All life stages can be found on a host by the end of summer.



Figure 2. An adult lace bug among numerous nymphs and fecal droppings (Whitney Cranshaw, Colorado State University, Bugwood.org).

On broad-leaved evergreens, lace bugs overwinter as eggs laid on the undersides of leaves. Eggs hatch in May in Virginia and two or more generations may occur during the growing season.

Damage

Lace bug damage first appears as yellow spots on the upper leaf surfaces of affected plants (Fig. 3). Lace bugs feed underneath leaves, but they kill surrounding cells as they feed with their piercing-sucking mouthparts, causing yellow spots to appear on the upper sides of the leaves. The first yellow spots that appear are very similar to mite damage, but the spots made by lace bugs are much larger. Leaves with severe feeding damage take on a bleached appearance (Fig. 4) or turn completely brown. Lace bugs produce numerous brown droppings that resemble dots of varnish on the underside of the leaves (Fig. 2). These droppings further distinguish lace bug damage from mite damage. When large numbers of lace bugs are

present, cast skins can be found attached to the leaves.



Figure 3. Yellowing and stippling feeding damage by lace bugs on sycamore (Whitney Cranshaw, Colorado State University, Bugwood.org).



Figure 4. Feeding damage on azalea (Whitney Cranshaw, Colorado State University, Bugwood.org).

Hosts

Lace bugs are prominent pests of azalea, rhododendron, sycamore, Japanese andromeda and other broad-leaved evergreens, and many deciduous trees and shrubs. Most species of lace bugs have fairly specific host preferences, occurring on a small range of related species.

Control

Lace bug control requires careful monitoring of susceptible plants early in the season. If lace bugs are found, apply control targeting either adults on deciduous plants or nymphs on broad-leaved evergreens. Spray the undersides of the leaves where lace bugs hide. Check for lace bugs several times

during the growing season in case populations build or resurge. For specific control recommendations, consult the most recent [Home Grounds and Animals Pest Management Guide \(VCE 456-018\)](#) for home landscapes, or the [Horticultural and Forest Crops Pest Management Guide \(VCE 456-017\)](#) for commercial plantings.

Important Lace Bugs in Virginia

Azalea Lace Bug Two generations of azalea lace bugs occur in Virginia each year. Treat the first generation from mid-May to mid-June; two sprays may be necessary. The second brood builds up to high populations in August and September and can cause severe damage on azaleas planted in full sun (Fig. 4). In some cases, the leaves turn completely brown by the end of the summer. If possible, move any affected plants to a shady location in the landscape.

Rhododendron Lace Bug Treat in May or June to control the first generation. Rhododendrons growing in full sun may yellow due to feeding damage. Damage by rhododendron lace bus is not as pronounced as for azalea lace bug, but treatment is sometimes needed.

Sycamore Lace Bug Treat in June or when nymphs first appear; a second treatment may be necessary for good control. This is an important pest of sycamore, especially on street and shade trees (Fig. 3). Multiple generations occur each year and defoliation may occur in severe cases.

Oak Lace Bug Commonly occur in low numbers on most oaks throughout Virginia, and treatment is not considered necessary in most cases.

Revision

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