



Viburnum Leaf Beetle

A Sustainable Places® Fact Sheet



The Viburnum Leaf Beetle, *Pyrrhalta viburni*, is a recently introduced pest, found in the U.S. in 1996. This insect is very destructive to primarily Viburnum species, that are an important understory of the natural and built landscape. The aesthetic damage combined with the loss of habitat and food source for wildlife is of major concern. Songbirds are especially dependent upon the fruit when other food is not available. The larvae feed extensively on the new foliage in Spring. The larvae become adults in early Summer, and then consume much of the second flush of foliage. Left uncontrolled, the beetle will kill susceptible plants after 2-3 years. Immediate recognition and natural control of this insect pest is essential for responsible stewardship. Pruning/"Trimming" should be confined to **ONLY** removal of deadwood and areas with egg cases, as this will attract more pests.

Habit & Control: Eggs are laid in branches that look like rows of small brownish-black bumps, 1-2 mm in diameter (between the size of a pin head and a match head). The egg cases are in sharp contrast to the greenish to brownish bark. Adult females excavate small cavities in the underside of young branches, laying up to eight eggs, then sealing the site with a cap of chewed bark and a special cement that they make. Egg cases may be found any time from July, when eggs are first laid, until they hatch the next Spring until May. These egg cases are easiest to find when the leaves have dropped for the season. Remove all of these branches properly with sharp tools and thoroughly **destroy** them.

Larvae hatch with the first flush of leaves from late April-May when they immediately begin to cause damage. Larvae may be seen from this time until June when they are hidden in the soil as pupae. Larvae may be controlled with soapy water spray that breaks down their outer exoskeleton. Larvae first emerge from eggs at about 1mm long, greenish-yellow to off-white and lack spots. Larvae go through three stages, each time shedding their skin. Second and third-instar larvae are yellowish-brown with black spots along their back. When they grow to 10-11 mm they drop to the soil to become pupae and then adults. Adults emerge from the soil in late June and are present until frost in October-November. As they get older, they feed more on the tops of the leaves, and like the adults are prone to drop off when disturbed.

Biological control of this insect has been found to be effective using a parasitic Asian Lady Beetles *Harmoina axyridis* was quite effective in consuming larval Viburnum Leaf Beetle, decreasing defoliation by 75%. The Spined Solider Bug, *Podisus maculiventris*, has reduced populations by 50%. A parasite nematode, *Heterorhabditis bacteriophora* was also very effective in controlling the larval or pupal stages of the pest with a mortality rate of 74%. Beware of an unacceptable pesticide that should NOT be used (Imidicloprid), that kills bees and beneficial soil organisms that has been irresponsibly recommended.

How to Control:

- **Identify**
- **Remove Egg Cases and Destroy** (This is the most effective measure to limit beetle populations!)
- **Spray Larvae with a 2% Soap Solution (5T Dr. Bronner's Pure Castile Soap/gal water)**
in the early AM (use Dr. Bronner's or Ecosense, NOT Dishsoap)
- **Introduce & Encourage Asian Ladybugs and other Predators**

Viburnum Leaf Beetle Egg Cases, Larvae, and Adult Photos

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Figure 1. Egg cases with a pencil and ruler to gauge sizes.



Figure 2. Newly hatched larvae.

Figure 3. Close-up of newly hatched larvae.

The images on this page will help you correctly find and identify the Viburnum Leaf Beetle in its various stages. The best way to control this pest is to remove and destroy the egg cases, that are often on the last year's growth shoots. It is important to effectively destroy the egg cases by burning or high heat exposure.



Figure 5. Left: 2nd Instar Larvae
Right: 3rd Instar Larvae before Pupae



Figure 4. Larvae and recent shed 'skin'



Figure 6. Adult Viburnum Leaf Beetles

Viburnum Species Susceptibility List

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Highly Susceptible:

Species first to be attacked, and generally destroyed in the first 2-3 years following infestation.

V. dentatum

V. nudum

V. opulus

V. opulus var trilobum (now americana)

V. propinquum

V. rafinesquianum

Note: Susceptibility exacerbated when grown in the shade)

Susceptible:

Species eventually destroyed, but usually not heavily fed upon until most of the susceptible species are eliminated.

V. acerifolium

V. lantana

V. rufidulum

V. sargentii

V. wrightii

Moderately Susceptible:

Species showing varying degrees of susceptibility, but usually not destroyed by the beetle.

V. alnifolium (syn. V. lantanoides)

V. x burkwoodii

V. x cassinoides

V. x carlcephalum

V. dilatatum

V. farreri (except 'Nanum' which is highly susceptible)

V. lantanoides (syn. V. alnifolium)

V. lentago

V. macrocephalum

V. x pragense

V. prunifolium

V. rhytidophylloides

V. tinus

Resistant:

Species that show little or no feeding damage, survive infestations well, but usually not destroyed by the beetle.

V. bodmamtense

V. carlesii

V. davidii

V. x juddii

V. plicatum f. tomentosum

V. rhytidophyllum

V. setigerum

V. sievoldii

Credit: Paul Weston, Cornell University, Department of Entomology

Viburnum dentatum Autumn Jazz™/“Ralph Senior” (Arrowwood)

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Outstanding, fire resistant, native shrub that develops into a wide, rounded silhouette. Beautiful fall color of burgundy and wine. Heavy bloomer followed by decorative berries that are relished by the birds. No major insect pests or diseases until 2018. Transparent structure in winter. Essential songbird and wildlife food source plant. 8-10' high and wide. Upright form. Zone 4-8.



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