

Cranberry Rootworm Beetle

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The Cranberry rootworm beetle (*Rhabdopterus picipes*) is one of several leaf-feeding beetles and weevils that consume foliage of woody landscape plants in South Carolina. These nocturnal-feeding adult beetles are shiny, dark bronze-black, about 1/4-inch long, and 1/8-inch wide. These beetles are seldom noticed because they hide in the landscape mulch during the daylight hours, and the foliar damage appears similar to that of hail damage. The adults feed on landscape plants for several weeks in the late spring and early summer. Their feeding damage results in curved, C-shaped, and elongated holes in leaves of azalea, rhododendron, camellia, blueberry, hollies, roses, redbud, oakleaf hydrangea, and other shrubs. After feeding, the female adults lay eggs on the soil. Upon hatching, young beetle larvae move into the soil to feed on the roots of the host plant. They feed throughout the summer until fall, and then move deeper into the soil to overwinter. The larvae pupate within the soil during early spring, and the adults emerge in late spring to begin foliar feeding and repeat the one-year life cycle.



Cranberry rootworm beetle (*Rhabdopterus picipes*) feeding damage on camellia foliage results in C-shaped holes.

Jim Baker, North Carolina State University, Bugwood.org

Management

Cultural Controls: Keep landscape plants as healthy as possible to tolerate the damage. If there is inadequate rainfall, irrigate plants weekly during the growing season providing 1-inch of water per week.

A soil analysis test is recommended to determine which nutrients are needed in the soil to improve plant growth and to determine if lime is required. In the absence of a soil test, fertilize plants with

slow-release, tree and shrub fertilizer, such as a 12-6-6, in early spring and again 6 weeks later at a rate of 1 pound per 100 sq ft. However, in the coastal counties of Beaufort, Charleston, and Horry, there is typically sufficient phosphorus that naturally occurs in the soil. Therefore, in these areas, use a 15-0-15 fertilizer around the shrubs during the spring. For proper nutrient management in landscape beds, have the soil tested the following fall or winter.

Although mulch provides a hiding place for the adult beetles, it is quite beneficial to landscape plants in conserving soil moisture, regulating soil temperature, and suppressing weeds. Apply a 3- to 4-inch deep layer of mulch around woody shrubs.



Cranberry rootworm beetle (*Rhabdopterus picipes*) feeding on azalea foliage resulting in curved, elongate holes.

Chazz Hesselein, Alabama Cooperative Extension System, Bugwood.org

Chemical Controls: Once flowering is over, shrub foliage should be sprayed with spinosad (a natural insecticide),

bifenthrin, lambda cyhalothrin, or permethrin as soon as feeding damage is detected. These are contact insecticides to control the adults feeding on the foliage. Also, spray to saturate the mulch or leaf litter beneath the shrubs, as during the daytime, the beetles hide in the mulch near the plants. To protect pollinating insects, do not spray during bloom. See Table 1 for examples of products labeled for foliar pest control on shrubs.

Alternatively, control can be obtained with soil drenches using a product containing imidacloprid. This is a systemic insecticide that is taken up at the base of the shrub and moves upward into foliage and flowers. It may take one week for imidacloprid to translocate throughout smaller shrubs, or up to a few weeks for larger shrubs. It is always best to apply imidacloprid after flowering to reduce risk to pollinating insects. Be sure the plants are well-watered the day before application (to enhance insecticide uptake), then drench the soil around the base of the shrubs with a solution of imidacloprid. The amount of product to use is determined by the height of the shrub in feet, so follow the label directions for mixing with water. Systemic insecticide products generally protect shrub foliage for a year and are best applied in the spring. Because soil applied insecticides, which are drenched around the base of the shrubs, do not move further outward into the root system, they will not kill the grubs feeding on roots nearby. See Table 1 for examples of products containing imidacloprid.

Table 1. Insecticides to Control Cranberry Rootworm Beetle on Shrubs.

Insecticide Active Ingredient	Examples of Common Insecticide Products Labeled for Use on Landscape Ornamentals
Bifenthrin	Ferti-lome Broad Spectrum Insecticide Concentrate Hi-Yield Bug Blaster Bifenthrin 2.4 Concentrate Monterey Turf & Ornamental Insect Spray Up-Star Gold Insecticide Concentrate Bifen I/T Concentrate Talstar P Concentrate
Imidacloprid	Monterey Once A Year Insect Control II Ferti-lome Tree & Shrub Systemic Insect Drench Martin's Dominion Tree & Shrub Drench Bayer Advanced 12 Month Tree & Shrub Insect Control Landscape Formula Concentrate Bonide Annual Tree & Shrub Insect Control w/ Systemaxx
Lambda-Cyhalothrin	Spectracide Triazicide Insect Killer for Lawns & Landscapes Martin's Cyonara Lawn & Garden Concentrate
Permethrin	Bonide Eight Insect Control Vegetable Fruit & Flower Concentrate Bonide Total Pest Control – Outdoor Concentrate Tiger Brand Super 10 Concentrate
Spinosad	Southern Ag Conserve Naturalyte Insect Control Bonide Captain Jack's Deadbug Brew Bonide Colorado Potato Beetle Beater Concentrate Ferti-lome Borer, Bagworm & Leafminer Spray Natural Guard Spinosad Landscape & Garden Insecticide Monterey Garden Insect Spray Concentrate Ortho Insect Killer Tree & Shrub Concentrate

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