

Root Weevil on Rhododendrons

Obscure root weevil (*Sciopithes obscures*), black vine weevil (*Otiobrychus sulcatus*), and woods weevil (*Nemocestes incomptus*) are the three most important of some dozen kinds of weevils attacking these plants.

Host/Site

Rhododendrons and azaleas (some varieties are resistant; see last paragraph on right). Root weevils feed and develop on a variety of plants, including salal or huckleberry thickets and wax myrtle.

Identification/appearance

Adults: 5 to 12 mm long, black or brownish in color, with wavy brown line across back or with flecks of yellow, white, or gray. Prominent snout-like feature has antennae attached.

Larvae: legless, white grubs with brown heads.

Life Cycle

Most species are less active in winter. Larvae feed on roots (especially damaging to shrubs in containers) and generally pupate in spring. Adults emerge from early April to August, depending on species. Leaf damage is from feeding by adults and occurs as new foliage expands and continues from late spring into autumn. The adults chew leaves, buds, and flowers. Adult root weevils do not fly, so spreading from adjacent areas is not rapid. The weevil must climb up from the soil level to reach leaves.

Natural Enemies

Ground beetle and rove beetle larvae and parasitoid flies and wasps.

Monitoring

Leaf damage occurs at night. To confirm that observed damage is from root weevils, monitor at night to retrieve specimens for identification. Monitoring can be combined with control by knocking them off onto cardboard placed carefully under plants. Fallen weevils can be collected in a jar and drowned with soapy water or placed in the freezer to kill. If leaf holes are large, scooped out bites, damage is probably not from weevils, which cut out small notches.



Root weevil, Ken Gray Collection, Entomology Department, Oregon State University



Typical root weevil damage on rhododendron

Damage/Action Threshold

Mild to severe notching of new leaves by adults causes mainly aesthetic damage. Plant health is usually not in jeopardy. (Root damage occurs but is usually only serious in potted nursery stock or very sandy soil or dry shade.) Action threshold varies depending upon the shrub placement and aesthetic standard required.

Cultural/Physical Controls

Always apply a compost mulch 2 to 3 inches deep. Water and fertilize appropriately. Most rhododendrons suffer heavy weevil damage because they are already stressed from poor care.

Sticky or slippery barriers are most useful on isolated, high-value plants with few main stems. Another barrier method that avoids trapping birds or beneficials is teflon barrier spray, marked under the brand name SureFire. This product makes the trunk slippery so that weevils fall off and cannot cross the sprayed area. With any barrier, trim off any plant parts that

touch the ground, structures, or other plants that will act as a bridge around the barrier. Don't allow barriers to constrict plant growth.

Replace severely damaged species with resistant types. Extensive research by WSU entomologists has identified species and hybrid rhododendrons that are resistant to adult weevil feeding. Some recommended hybrids (color/rating) include P.J.M. (pink/100), Rose Elf (blue/90), Oceanlake (violet-blue/80), Dora Amateis (white/79), Crest (yellow/79), Point Defiance (carmine-pink/76), and Odee Wright (yellow/73). For a more complete list, see WSU EB 0970 (now available on the Internet at http://www.gardenu.com/gardening/wsulit/bulletin/0970/Rhododendron_root_weevils).

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Biological Controls

Beneficial nematodes (e.g. *BioSafe*) are available for control of root weevil larvae. Apply as a soil drench as directed on the label. Soil temperatures must reach at least 55 degrees before using in the spring. Don't apply in direct sunlight. Water in thoroughly and keep soil damp. Summer/fall applications are most effective. Meerkirk Rhododendron Garden is now using nematodes exclusively in potted plant stock for weevil control. Product has short shelf-life and must be kept out of high heat. Nematodes do not survive the winter in the Pacific Northwest and must be reapplied, if needed, each season.

Chemical Controls

Chemical control should be avoided if possible. Acephate (*Orthene*) is registered for use against adult root weevils, but is extremely toxic to bees and other beneficial insects such as predacious ground beetles and should never be used on blossoming plants. If chemicals are used, spray only foliage that is being eaten.