

Black Vine Weevil*Otitorynchus sulcatus*
Coleoptera: Curculionidae[Back](#)[Main Index](#)

The black vine weevil is a pest of over 100 landscape plants. The adults feed on a wide variety of evergreen, deciduous, and herbaceous plants. The black vine weevil is also destructive in the larval form on yew (*Taxus* spp.), hemlock, rhododendron, and several other evergreens. It will sometimes feed on strawberry or impatiens. The black vine weevil is a pest in both Europe and North America. It is found predominantly in the northern portions of the United States, but its range extends into Virginia.

Description:

Black vine weevil adults are black weevils with short, broad snouts. The weevils are approximately 6 mm (1/4 inch) long. The head is narrow, the thorax is medium and rounded, and the wing covers are broad and well rounded. The wing covers have fine yellow hairs and conspicuous corrugations which appear as lines down the back. Adults cannot fly; their wing covers are fused together. All of the weevils are female; they reproduce parthenogenetically (by development of an unfertilized egg). Since the weevils do not fly, they disperse chiefly by walking, although they may be transported by man along with plants. The weevils feed at night and hide under leaf litter or in the soil during the day. When disturbed, the adults feign death. The larvae have a wrinkled c-shaped appearance. They are legless and white, with a well-developed brown head.



Adult black vine weevil and damage to leaf (R.A. Casagrande)



Stages of the black vine weevil life cycle (R. Harrison)

Life Cycle:

Overwintering larvae feed on roots deep in the soil and pupate in May. Adults dig their way out of the ground in mid-June and crawl up the plants to feed. Feeding occurs mostly at night and adults hide in dark places on the plants or on the ground during the day. When disturbed, they quickly drop to the ground. After one to two weeks of feeding, adults crawl or drop to the ground to lay eggs. For several weeks, they alternately feed and lay eggs. Eggs are dropped indiscriminately to the ground under the plants (as many as 500 per female!) over her entire life. If houseplants are placed under shrubs during the summer, eggs may be deposited on the soil of the containers. Ten to 14 days later the grubs hatch and burrow down into the soil searching out roots to feed on. Occasionally, a few adults can be found in houses during winter, apparently able to overwinter in this stage. Most die in the fall, and larvae survive the winter in the soil. There is only one generation per year.

Damage:

Larval damage by the black vine weevil is the most severe. The larvae feed on the roots and underground stems, sometimes girdling the root crown. Larvae even feed on roots of houseplants that spend the summer out of doors near infested plants. Symptoms include stunting and yellowing or off-color foliage. Root feeding often results in death of the plant. Plants may fail to put out new growth in the spring as a result of the root injury, or may put out the first flush of new growth, and subsequently die.

Unfortunately, home gardeners often first notice the problem when plants are near death. Adults feed from the outer margin of the leaf inward, creating characteristic notches, and these notches can be used as an early indicator of potential larvae in the soil. Adults cut notches on the margins only, they never create holes on the center of the leaf. On yew, needles nearer to the main trunk, at the base of the shrub, will show notching and feeding scars. While the foliar damage from the adult weevils is often not severe, it can be unsightly.

Monitoring:

Look for symptoms of feeding injury by adults. Injury (notches in leaves) will be easy to see on broad leaved evergreens (i.e. rhododendron), but may be harder to find on narrow-leaved plants (such as *Taxus* spp.). Weevils may be feeding on leaf edges, especially near the trunk. Use a flashlight at night (adults are nocturnal) during early to

mid-June to inspect plants for the presence of weevils. Or use a burlap cloth gathered in folds around the base of plants which provides a hiding place for adults during the daytime; gently unfold to see if adults are present. Ideally you want to detect the start of adult emergence activity so that you can accurately time a spray for adults when most have emerged, but before egg laying begins.

Control:

Hand removal of weevils can be effective, especially in small plantings or for individual plants. Where possible, quarantine plants with leaf notches. Some rhododendrons and azaleas show resistance to weevil feeding. Those that have a rolled edge or indumentum (fuzzy leaf undersides) may be difficult for weevils to feed upon. Insect parasitic nematodes in the genus *Heterorhadtis* are a promising biological control for larvae if certain conditions are met. Nematodes require adequate soil moisture and temperatures of 60 degrees F (or higher) in the top 5 inches of soil. Nematodes, available through garden supply cataloges, need to be applied when the larvae are present in mid to late summer. They also have been recommended, especially in warm greenhouse container culture, for root weevil control. If houseplant roots are found to be infested with larvae, discarding the plant may be the best practice. Washing off the roots and repotting might be an alternative, but success will depend on the amount of damage already done.

Chemical:

Except for protecting young plants, chemical control is not generally needed by homeowners. When it is required, homeowner treatments are best directed against adults during mid-June to kill new adults before they start laying eggs. Orthene can be applied at that time with a follow-up treatment 3 weeks later. Insecticide applications should be made late in the day (weevils are nocturnal feeders). Be sure to follow the label directions when using any pesticide.

Adapted from the Cornell Cooperative Extension and Virginia Cooperative Extension , 1999

PESTICIDES ARE POISONOUS!! Read and follow all safety precautions on labels. Handle carefully and store in original containers out of reach of children, pets or livestock. Dispose of empty containers immediately, in a safe manner and place. Pesticides should never be stored with foods or in areas where people eat.

When trade names are used for identification, no product endorsement is implied, nor is discrimination intended against similar materials. Be sure that the pesticide you wish to use is registered for the state of use.

The user of this information assumes all risk for personal injury or property damage.

Rhode Island Cooperative Extension provides equal program opportunities.

For more information, call the URI CE Gardening and Food Safety Hotline at 1-800-448-1011 or (401)874-2929 from outside Rhode Island; Monday-Thursday between 9 am and 2 pm.