

Black Vine Weevil

Coleoptera: Curculionidae, *Otiorhynchus sulcatus* (Fabricius)

*Revised by Eric R. Day and Ed Lewis**

Plants Attacked

The adults feed on a wide variety of evergreen, deciduous, and herbaceous plants. The larval form is destructive on yew (*taxus*), hemlock, rhododendron, and several other broad-leaved evergreens. Adults and larvae will sometimes feed on strawberry and impatiens.

Description of Damage

Two kinds of damage are conspicuous: Adults chew marginal notches in leaves, causing damage that quite often is confused with a disease or chemical injury. The 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, down inside of the shrub, show notching and feeding scars. Broad-leaved evergreens exhibit notching similar to that caused by the two-banded Japanese weevil and Fullers rose beetle. Larvae, the most destructive form of this weevil, feed on roots. When large numbers of larvae are feeding on the roots, the plants will wilt, turn brown, and die.

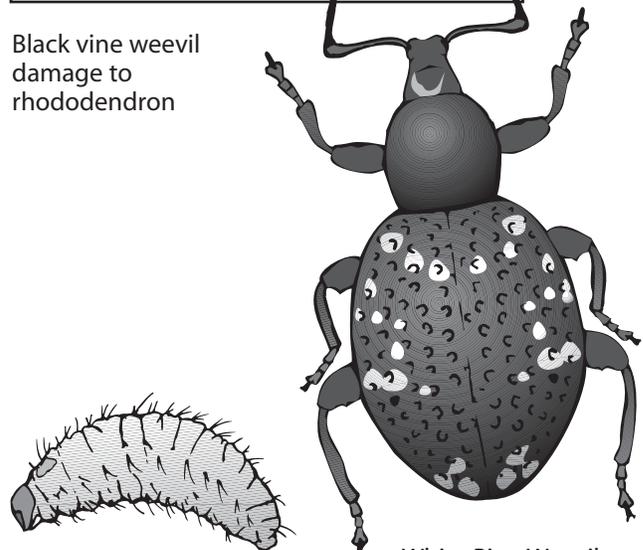
Identification

Black vine weevil adults are black, 1/4-inch-long weevils with short, broad snouts. 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. The larvae are white with a well-developed brown heads, but no legs.



Black vine weevil damage to rhododendron



Larvae

White Pine Weevil

* Director, Insect Identification Laboratory, and Assistant Professor, Department of Entomology, respectively, Virginia Tech

Life History and Habits

Overwintering larvae feed on roots deep in the soil and pupate in May. Adults dig their way out of the ground in mid-May and crawl up the plants to feed. Feeding occurs mostly at night and adults hide in dark places on the plants or on the soil during the day. When disturbed, they quickly drop the ground. After one to two weeks of feeding, adults crawl or drop to the ground to lay eggs. For several months, they alternately feed and lay eggs. Occasionally, a few adults can be found in houses during the winter. Most adults die in the fall. Larvae survive the winter in the soil. There is only one generation per year.

Control

Scouting. Examine yew and other plants by looking for adults feeding down in the center of plants, near the main trunk or stems. Adults usually hide in crotches under heavy bunches of needles. Look for the feeding adults at night with a flashlight. The best time of year to look is in May and June. The most distinctive feature of the damage is the notches these weevils create that start on the outer margin of the leaf.

Cultural Control. If possible, purchase pest-free stock; make sure leaves do not show any signs of notching by the adult weevils

Nonchemical Control. Beneficial nematodes in the soil work well for control. The two species recommended for control are *Heterorhabditis bacteriophora* and *Heterorhabditis meaidis*.

Chemical Control. If weevils or freshly damaged leaves are present, apply a systemic insecticide such as imidacloprid as a soil drench on the root zone in April or May to kill the larvae and adults.

A foliar treatment can be of value in some cases. It is critical to apply an insecticide after most adults have emerged, but before they begin laying eggs. Control is aimed at adults as they crawl on the ground and up the plants. The second or third week of June is optimal. Treat the soil surface and the main stems and branches thoroughly to destroy the feeding adults. See Virginia Pest Management Guides for specific control recommendations.

Distribution

The black vine weevil is a pest in Asia, Europe, and North America. It is found predominantly in the northern portions of the United States, but its range extends into Virginia.

Remarks

No male weevils have ever been found; this species of weevil, like a few other species of insects, is able to reproduce without fertilization. The females lay eggs that give rise to more females.