

**insect answers**



## ROOT WEEVIL CONTROL ON RHODODENDRONS

Root weevils are the most important pests of rhododendrons and azaleas in the Pacific Northwest. About a dozen kinds of root weevils attack these plants, but usually only five of them are of any significance. These are the obscure root weevil, *Sciopithes obscures*, black vine weevil, *Otiorhynchus sulcatus*, woods weevil, *Nemocestes incomptus*, *Dyslobus* spp. (no common name), and the clay-colored weevil, *Otiorhynchus singularis*. The first three are probably the most important.



**Black vine weevil adult.** (Photographer unknown)

### Damage

Although the larvae of several of these weevils do feed on the roots of many ornamentals, this type of damage usually is serious only in potted nursery stock or in very sandy soil. In the landscape environment, adults cause objectionable damage, consisting of mild-to-severe notching of new leaves, depending on species or variety of plant.

### Description and Biology

The obscure root weevil is brown, displaying a wavy brown line across the back near the rear. It is about 5 to 7 millimeters long ( $\frac{1}{4}$  inch). The black vine weevil is about 9 millimeters long ( $\frac{2}{5}$  inch), black or brownish black, often with small flecks of yellow or white. The clay-colored weevil is similar but lighter in color and smaller. The woods weevil is light to dark brown with gray spots on its back. It is about 5 to 7 millimeters long ( $\frac{1}{4}$  inch). *Dyslobus* are grayish black weevils ranging from 7 to 10 millimeters long ( $\frac{1}{4}$ – $\frac{2}{5}$  inch).

Larvae of all species of root weevils are very similar in appearance. They are legless white grubs with brown heads. The pupa, white in color, is about the same size as the adult. It is very soft and has the outline of the parts of the adult weevil.



**Root weevil larvae.** (Antonelli photo)

The life history is similar for all species. Weevils overwinter as adults (inactive during cold weather) or as larvae in the soil. In late May and June *Otiorynchus* larvae change to pupae, which are inactive and do not feed. Transformation to the adult stage occurs in June and July. Adults feed on plant foliage and begin to lay eggs 3 to 4 weeks after emergence. Obscure root weevil adults emerge beginning in August and are more numerous from August to October. As larvae emerge from the eggs, they burrow into the soil to feed on roots.

Woods weevil has a life history very similar to the other root weevils except the different stages of growth overlap. It is possible to find adults, eggs, larvae, and pupae all at one time in one location; however, a major peak in adult numbers occurs in late autumn.

Root weevils feed and develop on a wide variety of plants. Weedy fields, woodlands, and fencerows (especially salal or huckleberry thickets), all serve as sources of infestation for adjacent rhododendron plantings. Because these weevils cannot fly, they may require several years to spread entirely across a large planting from an outside source or from an infested plant brought into a clean planting.

## Control

**Biological control.** Various insect killing nematodes are available for control of immature root weevils as a soil drench. Limited data relative to the success of this technique is available; however, it is available for your use should you want to try it. They are best used when soil temperatures are 52°F or above (usually late summer to early fall). Also nematodes should be applied to soil previously saturated with water and should never be applied in direct sunlight, as UV light kills them quickly.



**Obscure root weevil.**  
(Photo—Ken Grey collection)

**Chemical control.** Use products listed in the current edition of the Pacific Northwest Insect Management Handbook (home and garden section for rhododendrons). A copy is on file in all County Extension offices. Apply to foliage when first signs of notching on new leaves are noticed. Repeat applications monthly until first frost.

No insecticides are registered for general control of larval root weevils.

In all cases avoid treating blossoms, as most chemicals are highly hazardous to bumblebees and other pollinators.

**Mechanical control.** Apply bands of sticky material to the trunk of the shrub to keep weevils down. Weevils are night feeders. They generally move to the trunk, or any other access to the foliage, the following evening. If a sticky band is present, they either will not cross it or may become trapped in it. This technique is less effective where taller plants overhang the



**Root weevil larval damage to lower stem.**  
(Antonelli photo)



**Adult root weevil damage to foliage.**  
(Antonelli photo)

rhododendrons. Indications are that prolonged use of this material on bare bark may be somewhat damaging. Snugly fitting a strip of polyethylene (Visqueen) around the trunk and applying the sticky material to the strip can avoid potential problems.

**Cultural control.** Recent research by WSU entomologists has shown some species and hybrid rhododen-

drons are less susceptible to adult weevil feeding than others. The following is a list of some rhododendron species and hybrids that are highly to moderately resistant. In most home landscapes, hybrids are more common than species. Unfortunately, hybrids are generally less resistant than species rhododendrons. Dark red flowered hybrid or species rhododendrons are generally susceptible.

## SPECIES RHODODENDRONS SHOWING RESISTANCE TO FEEDING BY ADULT ROOT WEEVILS

Species	Series	Possible Bloom Colors	Rating*
<i>heliolepis</i>	Heliolepis	white, rose	100
<i>impeditum</i>	Lapponicum	purplish blue	100
<i>scintillans</i>	Lapponicum	purplish blue	100
<i>burmanicum</i>	Maddenii	yellow to greenish white	100
<i>dauricum</i>	Dauricum	lavender-rose	97
<i>intricatum</i>	Lapponicum	mauve	97
<i>minus</i>	Carolinianum	rose, white	93
<i>desquamatum</i>	Heliolepis	rose, violet	93
<i>ferrugineum</i>	Ferrugineum	rose, white	93
<i>hemsleyanum</i>	Fortunei	white	93
<i>cuneatum</i>	Lapponicum	rose	90
<i>fastigiatum</i>	Lapponicum	lilac, purple	90
<i>yakusimanum</i>	Ponticum	white, rose	90
<i>ungernii</i>	Ponticum	white, pale pink	83
<i>rubiginosum</i>	Heliolepis	pink, rose	83
<i>irroratum</i>	Irroratum	white, ivory, rose	83
<i>racemosum</i>	Virgatum	white, rose	80
<i>russatum</i>	Lapponicum	blue-purple	80
<i>carolinianum</i>	Carolinianum	pink, mauve, white	80
<i>oreodoxa</i>	Fortunei	rose, white	80
<i>oreotrephes</i>	Triflorum	mauve, purple, rosy red	77
<i>vernicosum</i>	Fortunei	white, rose	77
<i>adenophorum</i>	Taliense	rose	77
<i>campylogynum</i>	Campylogynum	pink, purple, crimson	77
<i>xanthocodon</i>	Cinnaborinum	ivory, yellow	77
<i>diaprepes</i>	Fortunei	white, pale rose	73
<i>pubescens</i>	Scabrifolium	white, rose	73
<i>lepidastylum</i>	Trichocladum	pale yellow	73
<i>pemokoense</i>	Uniflorum	lilac-pink	73
<i>arizelum</i>	Falconeri	white, yellow, rose, crimson	73
<i>glaucophyllum</i>	Glaucophyllum	white, rose	73
<i>decorum</i>	Fortunei	white, pink, chartreuse	73
<i>cardiobasis</i>	Fortunei	white, rose	73
<i>praestans</i>	Grande	magenta-rose, pink	73
<i>hippophaeoides</i>	Lapponicum	lilac, rose	73
<i>euryisiphon</i>	Thomsonii	ivory, rose	73
<i>imperator</i>	Uniflorum	pink, rose	70
<i>concatenans</i>	Cinnaborinum	apricot, yellow	70
<i>yunnanense</i>	Triflorum	white, lavender, pink	70
<i>ciliatum</i>	Maddenii	white, rose	70
<i>discolor</i>	Fortunei	white, pink	70
<i>davidsonianum</i>	Triflorum	white, pink, rose	70

\*The higher the number, the less feeding is expected. A 100 rating indicates complete resistance.



## HYBRID RHODODENDRONS SHOWING RESISTANCE TO FEEDING BY ADULT ROOT WEEVILS

Hybrid	Possible Blossom Colors	Rating*
P.J. Mezzitt (P.J.M.)	pink	100
Jock	pink	92
Sapphire	blue	90
Rose Elf	white, flushed violet-pink	89
Cilpimense	white	88
Lucky Strike	deep salmon-pink	83
Exbury Naomi	lilac tinged yellow	81
Virginia Richards	Chinese yellow with crimson blotch	81
Cowslip	cream, pink	80
Luscombei	rose-pink	80
Vanessa	soft pink	80
Oceanlake	deep violet-blue	80
Dora Amateis	white, lightly spotted green	79
Crest	yellow	79
Rainbow	carmine-pink	76
Point Defiance	pink	76
Naomi	pink	76
Pilgrim	rich pink	76
Letty Edwards	yellow	76
Odee Wright	yellow	76
Moonstone	yellow	73
Lady Clementine Mitford	pink	72
Candi	bright rose	72
Graf Zeppelin	bright pink	71
Snow Lady	pure white	71
Loderi Pink Diamond	delicate pink	71
Faggetter's Favourite	cream with pink	70

\*The higher the number, the less feeding is expected. A 100 rating indicates complete resistance.



Prepared by A.L. Antonelli, Ph.D., Washington State University Extension entomologist, WSU Puyallup, and R.L. Campbell, Ph.D., WSU Research entomologist, retired.

College of Agricultural, Human, and Natural Resource Sciences

Use pesticides with care. Apply them only to plants, animals, or sites listed on the label. When mixing and applying pesticides, follow all label precautions to protect yourself and others around you. It is a violation of the law to disregard label directions. If pesticides are spilled on skin or clothing, remove clothing and wash skin thoroughly. Store pesticides in their original containers and keep them out of the reach of children, pets, and livestock.

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