

# HOME & GARDEN



## Root Weevils

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### Quick Facts...

Root weevils are common invaders of Colorado homes. Although a nuisance, they cause no harm to humans, pets or household furnishings.

The strawberry root weevil, rough strawberry root weevil and black vine weevil are the most common root weevils in Colorado and have similar life cycles.

Only in extreme cases is insecticide treatment needed to prevent infestations in the home.

Pyrethroid insecticides are recommended for damage-control treatments when adult root weevils threaten plant damage.

Root weevils are among the more common insects that incidentally invade homes during summer. They also develop on plants and occasionally cause injury by either adults (leaf notching) and larvae (root pruning). At least four species are now well established in the state, all in the genus *Otiorhynchus*. These include the strawberry root weevil (*O. ovatus*), rough strawberry root weevil (*O. rugostriatus*), lilac root weevil (*O. meridionalis*) and black vine weevil (*O. sulcatus*).

### Life Cycle

The species of root weevils most commonly found in Colorado are the strawberry root weevil, rough strawberry root weevil, lilac root weevil and black vine weevil. As adults, all four species are small, dark snout beetles.

Largest is the black vine weevil, which may reach 1/2 inch. It has characteristic patches of yellow hairs on the wing covers. Strawberry root weevils are shiny, brownish-black and about 1/4 inch long. Rough strawberry weevils and lilac root weevils are intermediate in size.

A behavioral characteristic is that, when disturbed, root weevils drop readily to the ground. They do not fly. Adults climb plants to feed at night and hide around the soil surface during the day.



Figure 1: Strawberry root weevil. (Photo from the Ken Gray collection.)



Figure 2: Black vine weevil. (Photo by John Capinera.)



Figure 3. Root weevil notching to euonymus.

The life cycles of all four root weevils are similar. Most root weevils overwinter as nearly full-grown, pale, legless larvae that feed on the roots of strawberry, raspberry, clover, spruce, Douglas-fir and many woody shrubs. Some black vine weevils may overwinter as adults.

Development and pupation of root weevils is completed in the soil. Most adults emerge sometime in June. Eggs apparently are laid near the crowns



Figure 4. Strawberry root weevil larva. (Photo from the Ken Gray collection.)



Figure 5. Strawberry root weevil. (Photo by Whitney Cranshaw.)



Figure 6. Rough strawberry root weevil. (Photo from the Ken Gray collection.)



Figure 7. Lilac root weevil.

of plants throughout the summer. This egg-laying is interspersed by feeding on foliage of various plants.

Root weevil feeding by adults produces characteristic notches along leaf margins. Euonymous, peonies and lilac are among the plants frequently damaged by adult root weevils. This damage typically is mistaken for grasshopper feeding.

## Household Pests

Root weevils wander into homes most frequently during late June and July. Household migrations greatly increase during periods of hot, dry weather. The insects apparently are attracted to the moisture of the building. Inside homes, the root weevils cause no injury to humans or household furnishings. However, they can be quite abundant and a considerable nuisance.

Just why these insects are attracted to homes is unclear, but perhaps the houses provide shelter during the hot summer months when the insects are relatively inactive. Moisture sources in and around homes also attract the adult weevils.

Because root weevils do no harm inside homes, the best way to handle infestations is to tolerate occasional beetles, vacuuming them as they are observed. Root weevils will move out of homes on their own, and infestations subside as rapidly as they begin.

Insecticides are not recommended indoors for root weevil control because the insects often are widely dispersed in a home.

Control also includes sealing openings and screening windows to prevent entry. Root weevil populations can be reduced by removing plants around the outside of the home on which the insects feed. Reducing watering around building foundations may limit root weevil migrations, as the adult insects appear attracted to shade and moisture.

Use of insecticides around the exterior of the building may help further suppress incidental migrations into buildings. Pyrethroid insecticides are most effective for this purpose, including products that have bifenthrin, cyfluthrin, or lambda-cyhalothrin as the active ingredient. These may be applied around the base of the foundation and/or on plants that show leaf notching injuries that indicate adult feeding.

## Plant Injury

Evidence of root weevil feeding is common but serious damage is rare. If necessary controls can be applied to either the adult stage or the larvae.

Adult feeding, as evidenced by leaf notching, can be controlled with sprays of certain pyrethroid insecticides such as bifenthrin, cyfluthrin, and lambda-cyhalothrin. These should be applied to the foliage and it can also be useful to treat areas at the base of plants, where they rest during the day. Control may be improved if applications are made late in the day or in evening, as the weevils become active and move onto the plants after dusk.

Larvae develop in the soil and require different treatment. The systemic insecticide imidacloprid can provide some control and is used as a drench to the soil so that it moves to the root zone. A biological control alternative are insect parasitic nematodes of the genus *Heterorhabditis*. (See fact sheet 5.573, *Insect Parasitic Nematodes*.) Treatments should be made in late spring and early summer when adult feeding on leaves is observed and egg hatch usually begins. Both imidacloprid and *Heterorhabditis* nematodes require that the soil be kept moist following application and the site should be irrigated immediately after application.

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