



Strawberry root weevil

Otiorhynchus ovatus

Order Coleoptera, Family Curculionidae; snout beetles
Introduced pest

Host plants: Arborvitae is preferred, but dogwood, hemlock, white, red, Scotch, and Swiss mountain pines, white cedar, juniper, and Norway, white, and Colorado blue spruce are also susceptible.

Description: Adults are approximately 5.5 mm long, shiny dark brown, and have long antennae. The elytra are covered with fine yellow hairs. Mature larvae are approximately 8 mm long and creamy-white with yellow to brown heads.

Life history: Larvae pupate in the soil in early spring. New adults emerge in late spring to early summer. Adults feed on foliage and deposit eggs in the soil near host plants. Adults are nocturnal feeders, often hiding during the day in the debris under hosts. Larvae feed on roots. The strawberry root weevil adult is flightless. There is one generation a year.

Overwintering: Larvae or adults in the soil.

Damage symptoms: Adults feed on and notch leaf margins. Heavy infestations may cause serious injury to foliage of young conifers. Larvae feed on roots. Heavy infestations may cause girdling of root crowns, with subsequent wilting and death.

Monitoring: Look for notching of leaf margins from mid June throughout the growing season. Where notching is observed, examine the debris under host plants for adults, or place pitfall traps or trap boards to monitor number of adults. Also look for wilting and dieback, and examine plant roots to detect the presence of larvae.

Chemical control: Foliar insecticides applied in July kill adult beetles before they deposit eggs. Soil drenches of a systemic insecticide in early August may kill larvae. Soil drenches of *Beauveria bassiana* and entomophagous nematodes (*Heterorhabditis bacteriophora*, *Steinernema carpocapsae*) in early August may kill larvae and pupae. Soil must be kept moist to be effective.

Biological control: Few parasitoids or predators are found feeding on larvae or adults; rather, the adults and larvae are susceptible to infections of soil-inhabiting fungi, such as *Beauveria bassiana*. Entomopathogenic nematodes may also give good control where plants are in containers or in landscapes with loose, well-watered soil.

Plant mortality risk: High.

Biorational pesticides: adults and larvae: *Beauveria bassiana*, entomophagous nematodes (*Heterorhabditis bacteriophora*, *Steinernema carpocapsae*)

Conventional pesticides: adults: acephate, bifenthrin, chlorpyrifos (nursery only), cyfluthrin, deltamethrin,



Strawberry root weevil adult. (W18)
Photo: Whitney Cranshaw



Strawberry root weevil adult. (239)
Photo: John Davidson



Strawberry root weevil adult. (240)
Photo: John Davidson

fluvalinate, lambda-cyhalothrin;
larvae: bifenthrin, imidacloprid