# RESEARCH LABORATORY TECHNICAL REPORT



## **Black Vine Weevil**

### By The Bartlett Lab Staff Directed by Kelby Fite, PhD

The black vine weevil (*Otiorhynchus sulcatus* L), also known as the Taxus weevil, is widely distributed throughout the northern half of the United States where it can be a serious pest of ornamentals in the landscape and in nurseries. The black vine weevil feeds on over 100 species of woody and herbaceous plants, with Taxus (yew), Rhododendron and azalea being preferred hosts.

The adult weevil (Figure 1) feeds on the foliage causing distinct, easily recognizable notches in the leaf margin (Figure 2). Feeding injury by the adult seldom is detrimental to the plant. Larvae of the black vine weevil inhabit the soil where they feed on the root system of their hosts. Heavy populations of larvae can destroy much of the root system, causing observable symptoms ranging from growth reduction and small, chlorotic leaves to sudden death of the plant.

#### Figure 1: Black vine weevil adult



#### Description

Adults are black and approximately 3/8" long. The thorax is covered with raised spots (tubercles), and the wing covers are mottled in white. Newly emerged

Figure 2: Feeding injury caused by black vine weevil



adults may be light brown. The larva is a legless grub, approximately 3/8" long and white with a brown head.

#### Life Cycle

The black vine weevil overwinters as larvae in the soil. Larvae feed on roots of their host in late summer through fall and then burrow deeper in the soil as cold weather approaches.

In early spring, the grubs resume feeding. Much of the damage to the root system occurs at this time because the larvae are large. Pupation occurs in

#### Figure 3: Larva



the soil in mid-to-late May and adults emerge in June. The wing covers on adults are fused and subsequently, it does not fly.

Figure 2. Feeding injury caused by black vine weevin

The black vine weevil feeds on host foliage only at night and usually remains in the duff (mulch) beneath their host during the day. Adults feed for several weeks before they begin laying eggs.

An unusual characteristic of this species is that males do not exist. All adults are females, capable of laying eggs which occurs in the soil beneath their host. Egg laying and feeding continue for as long as four weeks. Each adult is capable of laying up to 500 eggs. Eggs hatch soon after deposition and larvae burrow into the soil to begin feeding. One generation occurs each year.

#### Management

Black vine weevil populations can be maintained below damaging levels with appropriate treatments. Please contact your Bartlett Arborist Representative for more information.



Founded in 1926, The Bartlett Tree Research Laboratories is the research wing of Bartlett Tree Experts. Scientists here develop guidelines for all of the Company's services. The Lab also houses a stateof-the-art plant diagnostic clinic and provides vital technical support to Bartlett arborists and field staff for the benefit of our clients.