

Black Vine Weevil

Otiorhynchus sulcatus (F.)

Coleoptera: Curculionidae

Reding, M. E.; Klein, M. G.; Brazee, R. D.; Krause, C. R. 2003. Research on black vine weevil and white grubs in ornamental nurseries in Ohio by USDA-ARS. Wooster, OH: US Department of Agriculture, Agricultural Research Service Extension Circular. 189: 89-93.

Objective: To develop effective traps for monitoring emerging adult *O. sulcatus*.

Abstract: The black vine weevil, *Otiorhynchus sulcatus* (F.), can be a serious pest of ornamental trees, especially those grown in containers or larger field-planted trees in nurseries. Larvae feed on the roots and girdle the main stem resulting in poor growth rates and mortality in extreme cases. Control measures against *O. sulcatus* are initiated when adults are first found, but they are often difficult to detect. Adult *O. sulcatus* rest in concealed locations during the day and are active at night.

Black vine weevil is a serious pest of trees in the genus *Taxus* (yews). The efficiency of three trap types was tested for capturing adult weevils in a typical but unsprayed field nursery of *Taxus*. Two of these traps were effective. The first trap is a 900 cm² x 2.54 cm thick board with 0.6 cm grooves cut into one face. Placed grooved-side down, adult *O. sulcatus* hide in the grooves during the day. The second is a pitfall trap made from two 500 ml plastic drinking cups. The former trap caught weevils earlier than the latter one. Moreover, foliage beating to dislodge adults was done concurrently with the placement of traps in the field. The board trap captured adults earlier than either the pitfall trap or the traditional means of detecting adults by beating foliage. However, the pitfall trap still captured adults several days before they were found by the beating method.

Sampling Procedure: Cut a 2.54 cm board into 30 X 30 cm squares. On one side of each 30 x 30 cm piece, cut a series of 0.6 cm grooves. No information was given as to their spacing and interested users should contact the authors for this information. Ten equally spaced grooves may be sufficient. Place traps grooved side down beneath the crown of randomly selected yews. This provides an attractive, convenient hiding place for adults.

The second trap consists of two 500 ml plastic drinking cups. The first cup is placed in a hole beneath the crown of a randomly selected yew so that the lip of the cup is flush with ground level. Coat the inside rim of the second cup with grease to form an escape barrier and set the cup inside the first one.

Check traps regularly and initiate control measures when adult *O. sulcatus* are found.

Notes: These traps have not been used operationally and so they should be used with caution. The authors recommend further testing in commercial fields under normal management practices and with varying pest densities. No details were given as to the spatial deployment or number of traps needed to give reasonably accurate and precise information on weevil populations for management purposes.