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Great Lakes Forest Research Centre  
P.O. Box 490  
Sault Ste. Marie, Ontario  
P6A 5M7

## White Pine Weevil

Throughout the range of white pine in eastern North America probably no insect is a more prevalent pest of conifers than the white pine weevil, *Pissodes strobi* (Peck). Although white pine is the most common host, all pines and spruces may be attacked. By attacking and killing the leader, the top part of the main stem, the weevil seriously affects tree form and consequently the commercial and aesthetic potential of the tree. In poorly stocked plantations repeated weeviling of trees 1 to 10 metres in height can result in a commercially worthless stand of trees.



Weevil adult



Withered top whorl

The adult weevils hibernate in the litter under infested trees and emerge from their winter quarters when maximum daily air temperatures exceed 15°C, usually in April. They move to the upper part of the leader where they feed by inserting their snout into the inner tissues of the bark, and during this period of about 1 week they mate. The eggs are laid in the feeding punctures over a period of a month or more. The copious flow of resin from the tiny feeding punctures on the leader indicates attack. The eggs hatch in about 2 weeks and the tiny legless larvae tunnel downward, usually arranged in a ring formation in the inner bark. When the conducting tissues in the bark are severed, the top whorl of shoots withers, beginning in mid-July, eventually turns red and assumes the shape of a shepherd's crook. The mature larvae, about 7 mm long, tunnel into the wood. They construct chip-like plugs at the entrance hole and are transformed into pupae in the pith. The slim maggot-like larvae that are frequently found under bark in weeviled leaders are the immature forms of a small fly of the genus *Lonchaea*, whose exact role as a scavenger or predator has not been clearly established. Weevil adults emerge from the infested stem in August and September and after some feeding seek hibernating sites.

To date, natural control agents do not appear capable of maintaining tolerable levels of damage by weevils, especially in white pine plantations. However, if white pine is grown under a canopy of broad-leaved trees it is relatively free from weevil injury. Trees that are infested should be hand pruned down to the green foliage about mid-July and the wilted, infested leaders destroyed to prevent population increase. Another means of control is the use of a pesticide at 3- to 4-year intervals until the trees are over 10 metres tall. Stomach poisons with good residual qualities, applied in the spring as soon as the adults are observed, have been most effective to date.

For a currently acceptable insecticide consult an appropriate government official.

A.H. Rose and O.H. Lindquist

Copies of this leaflet can be obtained from the Great Lakes Forest Research Centre's Information Office.

Information on many other pine insects is given in "Insects of Eastern Pines", Publication No. 1313, available from authorized bookstore agents or from the Canadian Government Publishing Centre, Ottawa, Canada, K1A 0S9.

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