



Fact Sheets

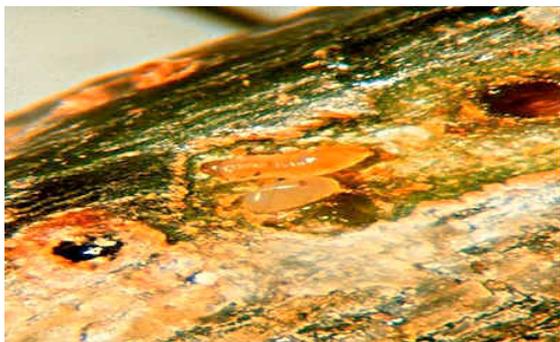
White Pine Weevil



White Pineweevil, *Pissodes strobi* (Peck), is considered the most destructive insect pest of eastern white pine in Pennsylvania with either forked or deformed trees resulting from repeated infestations. Trees become susceptible to injury when they reach a height of about three feet, and trees exposed to direct sunlight are more susceptible to attack.

Plants Attacked

Common Problem	Eastern White Pine	<i>Pinus Strobus</i>
	Jack Pine	<i>Pinus banksiana</i>
	Norway Spruce	<i>Picea abies</i>
Occasional Problem	Swiss Stone Pine	<i>Pinus cembra</i>
	Austrian Pine	<i>Pinus nigra</i>
	Red Pine	<i>Pinus resinosa</i>
	Scotch Pine	<i>Pinus sylvestris</i>
	White Spruce	<i>Picea glauca</i>
	Oriental Spruce	<i>Oriental Spruce</i>
	Colorado Blue Spruce	<i>Picea pungens var. glauca</i>
Rarely Attacked	Himalayan Pine	<i>Pinus wallichiana</i>
	Serbian Spruce	<i>Picea omorika</i>
	Douglas-fir	<i>Pseudotsuga menzesii</i>



White Pine Weevil eggs and larvae
photo by Rayanne Leyman



White Pine Weevil Adults
photo by David Shetlar

Insect Identification

The adult white pine weevil is a 1/4" long reddish-brown weevil with white patches on its wing covers. Like most weevils, the adult has a long snout-like beak from which knobbed antennae arise. The larvae, which live beneath the bark, are white, legless, with a distinct brown head and 5/16" long when mature.

Life History

- Over-winter** adult stage spends the winter in the duff under trees
- Spring** Mid-March to mid-April - adult females climb trees to feed on leaders. Females lay one to five eggs in the feeding wounds in tree leaders. The eggs hatch in about a week and the larvae feed just below the bark tunneling downward, girdling and killing the shoot as they go.
- Summer** The larvae mature and pupate in mid-July in cells carved into the sapwood and lined with shredded wood. The adults emerge in late-July and August and feed on the upper tree branches.
- Fall** Adults return to the duff to hibernate.



Damage Symptoms

The first symptom evident from attack by the white pine weevil is glistening droplets of resin on terminal leaders in late March and April. This is the result of punctures made by adults in the process of feeding and cutting egg-laying sites. The larvae do the most damage as they tunnel downward in the leader, causing the shoot to wilt and eventually die. Repeated infestations in successive years result in a deformed or forked tree.

Control Options

- Biological** Natural enemies do not provide adequate control
- Mechanical** Prune infested leaders. As soon as the leader droops, prune the leader out just below where the bark discoloration stops. Remove the pruned leader containing the larva from the site. Corrective pruning of the injured top involves removing all but a single shoot (one of the largest) at the topmost healthy whorl. This promotes healing, resumption of vertical growth and straightening of stem form.
- Cultural** Planting the trees in partial shade protects the leaders from weevil attack by encouraging less preferred bark thickness and bark temperature. However, the disadvantage of partial shade is a reduced rate of growth
- Resistant Varieties** Researchers at Cornell University looked at resistance to White Pine Weevil in selected exotic white pines. They found that Balkan Pine, *Pinus Peuce*, and Western White Pine, *Pinus monticola* showed the best resistance to the weevil. However, Western White Pine is more susceptible to white pine blister rust, a bark disease, and also was more sensitive to winter wind injury. While Balkan Pine was more winter hardy, it was more susceptible to needle blight diseases.
- Chemical** Spray only the leader with a registered insecticide in the Spring when the sap flow from the adult feeding is observed (late-March through April).