Aphids

Insect and Disease Laboratory • 168 State House Station • 50 Hospital Street • Augusta, Maine • 04333-0168

Description and Damage

Aphids are small, soft-bodied sucking insects which pierce plant tissues and draw out the juices. They may or may not possess frail wings. Most trees and plants are attacked by aphids. Some of the aphids are very injurious when abundant as in the case of the balsam woolly aphid on fir. Most of the aphids which occur on shade and street trees do not cause serious damage but their habit of secreting a sticky material known as honeydew is sometimes annoying. When aphids are abundant, honeydew may fall as a mist on automobiles and other objects beneath the infested trees. A black fungus, known as sooty mold, often develops as a dull black film on the coating of honeydew. If allowed to dry and remain on surfaces for an extended period, this honeydew-sooty mold will be very difficult to remove and may discolor the surface to which it adheres.

Host Trees

Some of the host trees on which aphids may become abundant or noticeable include elm, maples, willow, balsam fir, spruce, and white pine. On elm, two common aphid species may cause trouble. These are the woolly apple aphid which causes stunted twigs and rosetted leaves and the leaf curl aphid curls or cups the leaves but does not rosette them. In both instances, woolly aphids are seen if the curled leaves are unrolled in early summer.

Quite conspicuous on silver maple is the woolly alder aphid which is covered with white woolly threads. Colonies appear as white woolly patches along the mid-vein on the undersurface of the leaves. These woolly threads can become an annoyance around homes in late summer as they accumulate on the ground underneath heavily infested trees.

The Norway maple aphid which commonly is found (through the summer) on the under-surface of Norway and sugar maple leaves is rather large, hairy, greenish, and brown marked. Heavy infestations of the aphid wrinkle, blacken, and stunt the leaves. They may also cause a leaf drop to occur in midsummer.

There are several species of aphids which are abundant on birches. One species that appears early causes corrugated folds on the leaves which become filled with aphids and white granular material on the undersurface of the leaf. In heavy infestations, premature leaf drop ocurs and twigs and branches may die. Other species of birch aphids produce honeydew which blackens much of the foliage or cause leaves to drop readily when disturbed.

On Scotch, Austrian, and especially white pine, an aphid known as the pine bark aphid (Pineus strobi) may cover the trunk and branches in white woolly patches. Persistent and heavy infestations of this aphid will reduce tree growth, and may eventually kill trees.

The white pine aphid (Cinara strobi), a large black aphid, feeds in large clusters on twigs and branches of white pine. The eggs of this insect are oval and jet black, laid in rows of 5 or 6 on the pine needles and easily seen with the naked eye. Heavy infestation may seriously reduce the growth of trees.

On balsam fir, the balsam wooly aphid (Adelges piceae) may cover the tree trunks in masses of white wooly wax secreted by the aphids to cover themselves. When abundant, this aphid weakens and kills trees. Another phase of this aphid on balsam fir causes the tops of crowns to become distorted with "goutly" twigs that die.

Other injurious aphids are described on separate Maine Forest Service pest sheets. These are: balsam twig aphid which attacks fir and spruce; pine leaf aphid which attacks white pine, red and black spruce; Cooley spruce gall aphid which attacks Colorado Blue, white Engleman, and Sitka spruces and Douglas fir; eastern spruce gall aphid which attacks Norway, white, red, and Colorado blue spruce.

Control*

Natural: Many natural enemies or predators such as lady beetles, syrphid fly larvae, and internal parasites are usually found with high aphid populations. Pesticides that are applied to foliage to control aphids can also reduce predator populations. Pesticides are usually recommended only in protection of high value crop trees in plantations such as Christmas trees.

A number of readily available insecticides such as malathion, acephate, carbaryl, or diazinon** are registered for use against aphids, however, check the label on the formulation you intend to use to be sure it is cleared for your spraying needs. Insecticidal soap controls some species also.

When confined to the trunks of only a few trees, bark aphids can be reduced with a strong stream of water from a garden hose.

For further information about this pest you should contact the Insect and Disease Laboratory, 50 Hospital Street, Augusta, ME 04330-6514, tel. 287-2431.

***NOTE**: These recommendations are not a substitute for pesticide labeling. Read the label before applying any pesticide. Pesticide recommendations are contingent on continued EPA and Maine Board of Pesticides Control registration and are subject to change.

**Some formulations are restricted-use pesticides and may be purchased or used only by certified applicators.

Caution

For your own protection and that of the environment, apply the pesticide only in strict accordance with label directions and precautions.