

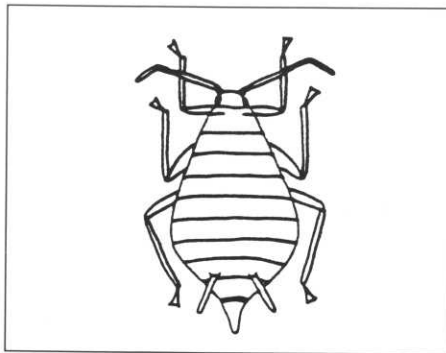
Aphids on Trees & Shrubs

Jerry Spetzman and Jeffrey Hahn

Aphids, sometimes known as plant lice, are insects which are common on trees and shrubs, including mockorange, viburnums, ash, maples and fruit trees. They are small (about 1/10 inch long), pear-shaped, soft-bodied insects which occur in many colors, such as black, green, pink, red, yellow, brown or gray. They tend to cluster on the underside of young leaves or developing stems.

Aphids have a complex life cycle that often involves several different plants. They usually overwinter as eggs hidden in cracks and crevices on the bark or near the buds of trees and shrubs. After egg hatch, aphids give birth to live young with about one week between generations. Periodically, winged forms develop to fly to other locations.

Aphids suck plant juices through a fine, needle-like stylet. Feeding causes leaf curling, stunting of growth, distortion or chlorosis, which sometimes is mistaken for herbicide damage. Large populations of aphids can cause serious



Typical aphid adult.

damage on infested plants. Some aphids can also carry plant diseases, especially viruses, from plant to plant.

Excess sap ingested by aphids is excreted in the form of honeydew, a sticky, sugary liquid which coats bark, leaves and other objects below. A black fungus called sooty mold may form on the honeydew. Sweet-feeding ants feed on the honeydew and will tend and protect the aphids to maintain this food source.

Aphids are usually not an important

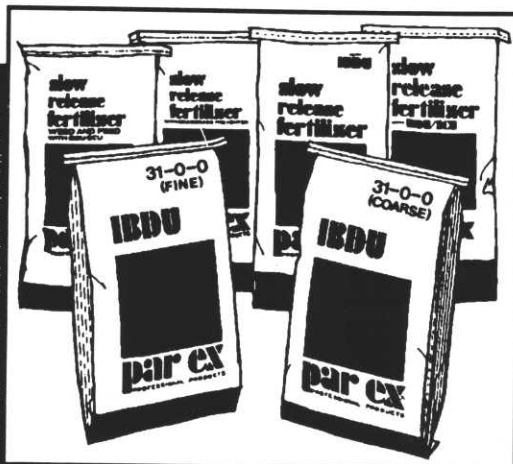
problem as their populations are kept low by many natural enemies, such as ladybugs (ladybird beetles), green lacewings, damsel bugs, syrphid flies, aphid parasites and certain fungi. During normal springs, heavy rainfalls also provide natural control by knocking the aphids out of the trees and shrubs and killing them. In the absence of such hard rainfall, as was the case in 1987 and 1988, aphid numbers can build rapidly.

Most healthy, mature trees and shrubs are able to tolerate aphids, even when they occur in large numbers. Recently transplanted or stressed ornamentals can be significantly weakened by heavy aphid numbers.

When an aphid's natural enemies are present, insecticides should not be used as they will kill the natural enemies as well as the aphids. High pressure spraying with a garden hose is a good non-chemical control to dislodge and kill the aphids.

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New Corporate Program Will Benefit GCSAA S&R

A national commercial safety products distributor has agreed to donate 1 percent of revenues generated from golf course sales to help fund the scientific and educational efforts of the GCSAA Scholarship & Research Fund.

SafetyMaster Corp. will distribute its specially-designed, 81-page golf course safety equipment catalog—offering personal protective clothing, respirators, eye and face protection, hearing protection, first aid supplies, gloves, boots and spill clean-up products—to GCSAA member superintendents in mid-May.

In addition to the donation, the company is also offering GCSAA members a 5 percent discount on all catalog orders.

William R. Roberts, CGCS, president of the S&R board of trustees, said he was delighted that SafetyMaster had stepped forward with the donation program. "Safety products are a critically important part of our efforts to protect our employees and this program fits very well with the goals of the GCSAA S&R."

Ted Rieple, SafetyMaster's president, said the program was part of the company's philosophy of industry involvement. "We wanted to do something to show that we're committed to the golf course maintenance marketplace. The superintendents told us that support for the Scholarship & Research Fund was the best way to do that.

"Superintendents will find that our catalog gives them a simple and extremely affordable way to meet their safety needs," he said, adding that SafetyMaster has technical experts to answer any questions about regulatory requirements or other safety concerns. Those questions can be directed towards SafetyMaster's toll-free number 800/825-7233.

The SafetyMaster donation program is one of a number of new "partnership" agreements that benefit GCSAA S&R, the 36-year-old non-profit foundation dedicated to providing resources for scientific and educational advancements in professional golf course management. For more information on GCSAA S&R or the SafetyMaster program, contact the GCSAA Development Department at 913/841-2240.

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Large aphid numbers can be controlled readily with insecticides such as acephate (Orthene), malathion, diazinon, chlorpyrifos or insecticidal soap. Some aphids may move from one plant to an alternative host plant depending on the season of the year. Dormant oil, applied in March, can be used effectively to control aphid eggs on twigs and bark of the winter host plant. It is very important to follow all label directions and check for application restrictions.