

Spider Mites, the Chlorophyll Thieves

by

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When I first learned about the disease and pest problems of Leyland cypress trees in Tree Steward classes two years ago, I had no idea that I would spend so much time actually examining these trees and writing about the health issues of Leylands and other evergreens grown in our area. Keep in mind that if your evergreens have one disease or pest, they may have at least one other. The overall health of a tree will be compromised if it is weakened in some way, whether through disease, insect or mite infestation, or mechanical damage to roots, bark, needles, or leaves. To complete the triad of major problems of evergreens, this week's column focuses on spider mites.

Spider mites are frequent pests on evergreens and deciduous trees. Mites are related to spiders and ticks. Unlike insects, mites have a single body part and eight legs and do not have wings. Mites are nearly microscopic, but an infestation of millions of mites can cause severe tree damage. According to the University of Kentucky-College of Agriculture Cooperative Extension Entfact-438, mites feed by piercing the needles or leaves with their sharp mouthparts in order to suck out the contents of individual cells, thus depriving trees or shrubs of chlorophyll, which plants need to absorb energy from light. During a mite infestation, needles or leaves develop stippling or flecking, eventually turning yellow or bronze. Premature loss of needles or leaves may result.

The spruce spider mite *Oligonychus unuguis* (Jacobi) is found throughout Virginia and feeds on many varieties of evergreens, including spruce, fir, juniper, arborvitae, and some varieties of pine. Eggs are laid on the undersides of needles and twigs, develop over the winter, and hatch in mid-April. Five to eight generations of mites occur each year. Spruce spider mite activity slows during the summer months and rebounds when the weather becomes cooler, often continuing into December or later, if the winter is mild. The resulting damage may not be noticed until the following summer. Mites can be identified with a magnifying lens, but an easy way to check for mites is to hold a piece of white paper under a branch. Gently shake the branch and observe for tiny specks moving across the paper.

Predatory mites, thrips, and lady beetles may provide some control against mites. Spraying small bushes with water from a garden hose can dislodge mites from the needles. Dormant oil can be applied during the winter or early spring to kill the eggs and horticultural oil can be used during the warmer months. Be aware that both dormant and horticultural oils can discolor foliage. Insecticidal/miticidal soaps also are used during the warmer months and may be helpful in combating both warm and cool season mites. Virginia Cooperative Extension (VCE) Publications 444-221 and 444-235 both provide information on mite infestation.

Whether you choose tall evergreens to provide privacy and shelter from winter winds or low-growing evergreen shrubs to enhance the beauty of your property, it pays to observe throughout the year for signs of disease or pests. Spider mites, bagworms, and fungal diseases can spread insidiously until the critical point is reached and damage is noticeable. With diligence and the right diagnosis and treatment, trees and shrubs often can be saved to live long, healthy lives and provide food and shelter for woodland creatures.

Gloucester Master Gardeners and Tree Stewards are available to help you with spider mite or other pest infestation or disease problems and to answer questions about pesticide use. Call the Gloucester Extension Office at (804) 693-2602. VCE Publications 426-706 and 426-710 contain crucial information about choosing and applying pesticides safely.

July 24, 2014