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Issue 4, March 16, 2020

Arkansas Plant Health Clinic Newsletter

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Magnolia

Southern Magnolia (*Magnolia grandiflora*) is a staple in the southern landscape. It's grown for its stately size, glossy evergreen leaves, and lovely blooms. They grow best in acidic soils (pH 5.0-6.0). They prefer well drained, loamy, moist, rich soils. Magnolias are best grown in part shade to full sun. They have large water requirements, needing 40-80 inches of water a year. They don't do well however in heavy soggy soils. Many of the leaf samples that come to us at the Plant Health Clinic are simply older leaves that the tree is shedding or preparing to shed. Although evergreen, Southern Magnolia begin dropping leaves in the fall through early spring as they replace their leaves a few at a time. The degree of leaf drop depends on genetic and physiological factors affecting the tree. Some will lose most of their leaves before new foliage comes out. This is unsightly and often frightens homeowners who feel their tree has a serious problem. Magnolias don't suffer from many serious diseases. They can get fungal leaf spots which don't do much damage. Insects such as magnolia scale can be a problem. Blackening of the leaves with sooty mold is a good indication of scale infestation. Fine horticultural oil applied early in the season will usually suppress scale, or you may use Bio Advanced Insect Control for Trees and Shrubs. The most serious disease problem is Verticillium Wilt caused by the fungus *Verticillium albo-atrum* or *Verticillium dahlia*. Verticillium Wilt is a soil-borne disease with a huge host range. The fungus invades through the roots and blocks the water conducting vessels of the plant. Symptoms are chlorosis, branch by branch decline and an overall thinning of the canopy. Eventually death occurs. When twigs or branches are cut in cross section, streaking may be seen in the wood. In magnolia the sapwood is a general brown color, not as obvious as the green to dark brown streaking found in other species of trees. Environmental stresses make trees more vulnerable. There is no cure for Verticillium Wilt. The fungus exists for a long time in the soil. If your Magnolia dies from Verticillium, do not replace with a tree or shrub species that is also susceptible. Therefore, when choosing a replacement tree or shrub, choose a resistant host.

Resistant hosts:

Manzanita
Birch
Box
Hornbeam
Katsura tree
White rock rose
Sage-leaf rock rose
Rock rose
Orange, lemon, grapefruit
Dogwood
Hawthorn

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SPDN
Southern Plant Diagnostic Network

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Eucalyptus
Beech
Fig
Locust
Honey locust
Holly
Walnut
Liquidambar, sweet gum
Apple, flowering crabapples
Mulberry
Oleander
Western sycamore Plane tree
Pyracantha, firethorn
Pear
Oak
Willow
European mountain ash
California laurel
Linden

Verticillium Wilt-*Verticillium spp.*

Photo by USDA Forest Service - Northeastern Area, USDA Forest Service, Bugwood.org

Magnolia-Natural senescence

Photo by Sherrie Smith, University of Arkansas Cooperative Extension

Euonymus

Euonymus is ubiquitous in the landscape. It is one of the most widely sold evergreen landscape plants found in both commercial and home landscapes. Despite its popularity, euonymus is prone to several insect and disease problems. Euonymus scale, *Unaspis euonymi*, is the most common and aggravating insect problem we see on Euonymus. Euonymus scale is such a problem that we no longer recommend *Euonymus japonica* to growers. Scale can also attack pachysandra, bittersweet, camellia, celastrus, ivy, hibiscus, holly, and Ligustrum. Scale insects injure

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plants by using their piercing sucking mouthparts to feed on sap. Sooty mold fungi often colonize leaves that have become coated with the excess amounts of sugary sap that the insects secrete. Sooty Mold fungi do not directly injure the plants but may reduce their ability to photosynthesize. Plants heavily infested with scale grow slowly, become chlorotic and stunted. Severe infestations may cause branch dieback and plant death. Male euonymus scale are easily observed with their elongate white bodies. Females are less noticeable, although larger (over 1/16 inch long), brown, and pear-shaped. In severe infestations, leaves and stems may be heavily encrusted. There are several generations a year. Crawlers are active in May, June, and July. Plants in shady locations with poor air circulation are more at risk than those in open sunny locations. Over-fertilization and poor watering practices, either too much or too little, promote scale infestations. Heavily infested plants should be pruned back, and new growth protected with insecticide treatments. Dormant oils applied during the winter months help reduce over-wintering populations. Fine horticultural oils and insecticidal soaps are options for summer control. Bio Advanced Tree and Shrub Insect Control (Imidacloprid) is a systemic insecticide that gives good results, or Bio Advanced Garden Power Force Multi-Insect Killer (Cyfluthrin). Spreading euonymus, (*Euonymus kiautschovicus*), Dwarf winged euonymus (*Euonymus alatus* 'Compactus'), and Winter creeper euonymus (*Euonymus fortune*i), are more resistant to heavy attacks by this pest. All, however, may get the pest.

Euonymus Scale-*Unaspis euonymi*

Photo by Sherrie Smith, University of Arkansas Cooperative Extension

Euonymus Scale-*Unaspis euonymi*

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Camellia

The Purple or Ribbed Tea mite, *Calacarus carinatus*, is an Eriophyid mite. Unlike larger spider mites, eriophyid mites have an elongated body, and are extremely difficult to see even under magnification. It is easier to see their white cast-off skins than the mites themselves. The adult female is purple with white longitudinal stripes. Ribbed tea mites are also known as rust mites because of the bronzing that occurs on infested leaves due to their feeding activity. Leaf curl and bud blight also occur. Ribbed tea mites can be serious pests of Camellia, causing extensive bronzing of leaves. They are especially active during cooler temperatures in the spring. Ribbed tea mite eggs are minute, circular, flattened, and nearly colorless. The females lay their eggs mostly along veins. Life cycle depends on temperature but is approximately 10-12 days. Numbers decline during rainy periods. Multiple applications of miticides such as Avid give control. Homeowners will find insecticidal soaps and fine horticultural oils helpful. Unlike Spider mites, Eriophyid mites can also be killed using Sevin. The most effective and easiest product to use is a systemic insecticide such as BioAdvanced Science-Based Solutions 3-in-1 Insect, Disease & Mite Control.

Camellia Purple (Ribbed Tea Mite) Damage-*Calacarus carinatus*

Photo by Sherrie Smith, University of Arkansas Cooperative Extension

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Camellia Purple (Ribbed Tea Mite) Shed Skins-*Calacarus carinatus*

Photo by Sherrie Smith, University of Arkansas Cooperative Extension

Camellia Purple (Ribbed Tea Mite) Damage-*Calacarus carinatus*

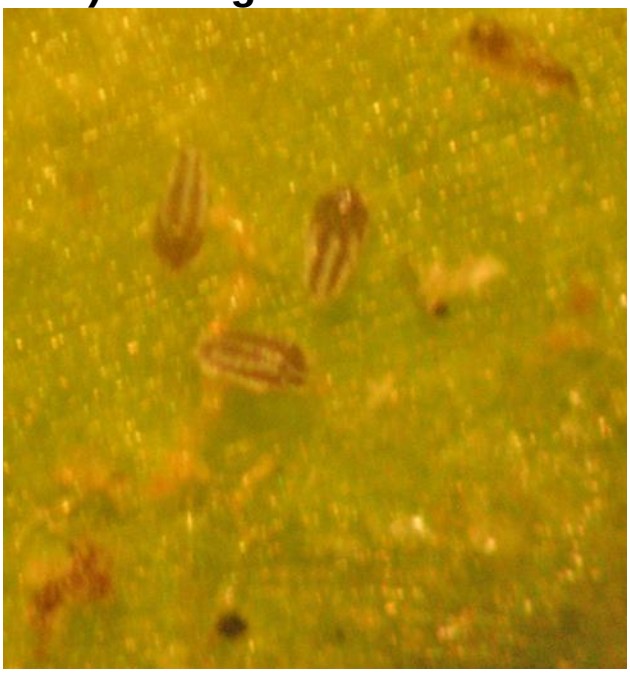

Photo by Sherrie Smith, University of Arkansas Cooperative Extension

This bulletin from the Cooperative Extension Plant Health Clinic (Plant Disease Clinic) is an electronic update about diseases and other problems observed in our lab each month. Input from everybody interested in plants is welcome and appreciated.

"This work is supported by the Crop Protection and Pest Management Program [grant no. 2017-70006-27279/project accession no. 1013890] from the USDA National Institute of Food and Agriculture."