



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.

Euonymus

Euonymus scale, *Unaspis euonymi*, is the most common Euonymus problem we see at the Plant Health Clinic. Scale is an aggravating and serious insect pest of euonymus. Euonymus scale is such a problem that many homeowners give up in disgust, and remove their infested plants after several seasons of battling scale problems. These insects can also attack pachysandra, bittersweet, camellia, celastus, ivy, hibiscus, holly, and ligustrum. Scale insects injure plants by using their piercing sucking mouthparts to feed on sap. The excess amounts of sugary sap that the insects secrete attract Sooty Mold fungi that colonize leaves, twigs, and branches, turning them black. Sooty Mold fungi do not directly injure the plants, but may reduce their ability to photosynthesize by coating the leaves with the heavy black coating. Heavily infested plants grow slowly, become chlorotic and stunted. Severe infestations may cause branch dieback and plant death. Males are the most easily observed with their elongate white bodies. They can heavily encrust the leaves and stems of the plant. Females are less noticeable, although larger (over 1/16 inch long), brown, and pear-shaped. There are several generations a year. Crawlers are active in May, June, and July. Plants with poor air circulation are more at risk than those in more open settings. Over-fertilization and poor watering practices, either too much or too little, promote scale infestations. Heavily infested plants may 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. Bayer Advanced Tree and Shrub Insect Control (Imidacloprid) is a systemic insecticide that gives good results, or Bayer Advanced Garden Power Force Multi-Insect Killer (Cyfluthrin). Spreading euonymus, (*Euonymus kiautschovicus*), Dwarf winged euonymus (*Euonymus alatus* 'Compactus'), and Winter creeper euonymus (*Euonymus fortune*), are more resistant to heavy attacks by this pest

than other varieties. Be aware, however, that Winter creeper is invasive and can become a pest in itself.

Euonymus scale-*Unaspis euonymi*



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Euonymus scale-*Unaspis euonymi*



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Blueberry

Crown gall, caused by the bacterium *Agrobacterium tumefaciens*, can infect 140 genera in over 90 families of plants. It is a serious disease of roots, stems, and crowns. Crown gall is commonly found on cherry, grape, muscadine, apple, plum, blackberry, raspberry, blueberry, rose, cypress, hibiscus, lilac, peach, privet, viburnum, euonymus and willow to name a few. Grains, vegetables, grasses are non-hosts. *Agrobacterium tumefaciens* is a soil-borne pathogen. It enters the plant through wounds in the bark made by animals, insects, grafting and cultivation tools. The majority of galls are only a few inches in diameter, but some become much larger. Young galls are light, tan-colored, and soft. As they age they become hard, woody, and nearly black-colored. The galls are often mistaken as a natural part of the plant by the uninitiated. A few small galls do little damage to plants. However, heavily infested plants may become stunted, with small yellow or red leaves resulting from a restriction of nutrients. Wilting and death may occur. Areas with a history of Crown gall should be avoided for 2-3 years. Avoid damaging plants with mowers and weed eaters. Prune during the dormant season if possible, as the bacterium is less active at that time. It is recommended to dip the roots of new plants that are susceptible to Crown gall in a product called Galltrol before planting. Galltrol is a competing non-pathogenic strain of *Agrobacterium* that helps prevent infection by the Crown gall pathogen. Where Crown gall has become a serious problem in ornamentals, select a species that is not susceptible. Abelia, Tree of Heaven, Mimosa, Serviceberry, Birch, Boxwood, Heather, Hornbeam, Catalpa, Holly, Mountain laurel, Golden-rain tree, Larch, Leucothoe, Sweet gum, Cedar, Redbud, Yellowwood, Smoke tree, Deutzia, Beech, Ginko, Kentucky Coffee-tree, Tulip tree, Magnolia, Oregon Grape holly, Spruce, Andromeda, Pyracantha, Sumac, Elderberry, Sassafras, Hemlock, and Zelkova are all immune or resistant to Crown gall.

Blueberry Crown gall- *Agrobacterium tumefaciens*



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Blueberry Crown gall- *Agrobacterium tumefaciens*



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Oleander

Oleander is a large, fast growing, evergreen shrub with a long bloom habit. They bloom in shades of red, pink, salmon, white, and yellow. Some cultivars are very fragrant. Oleander is tolerant of most soil conditions, including drought. It performs best with half a day or more of direct sun, but tolerates shade. However, it is not winter hardy in most parts of Arkansas. Oleander is only reliably hardy in zones 8-10. It can survive frost and temperatures as low as 15-20°F, but foliar damage occurs at those temperatures.

Oleander winter damage



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Camellia

The Purple or Ribbed Tea mite, *Calacarus carinatus*, is an Eriophyid mite. The adult female is purple with white longitudinal stripes. These extremely tiny mites are known as rust mites because of the bronzing that occurs on infested leaves due to their feeding activity. Leaf curl and bud blight can also occur. Another sign of rust mite infestation is the dusty appearance caused by their white cast off skins. These are actually easier to see than the mites themselves. Ribbed tea mites can be serious pests of Camellia, especially during cooler temperatures in the spring. Their eggs are minute, circular, flattened, and nearly colorless. Eggs are laid 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.

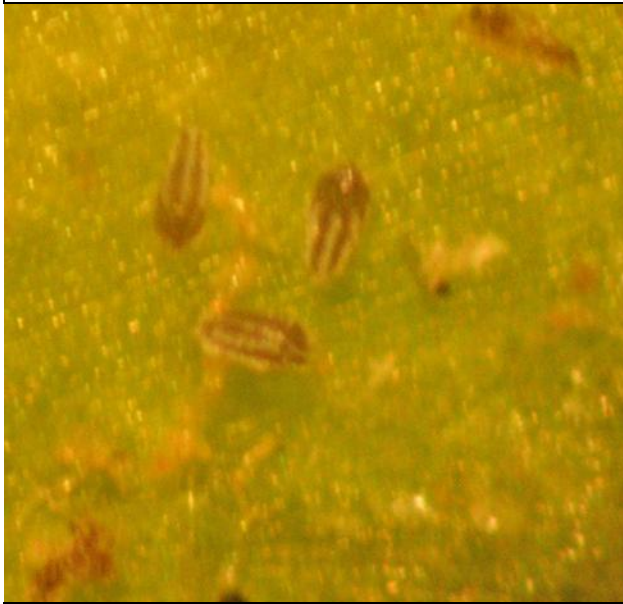
Camellia with Ribbed Tea mite damage- *Calacarus carinatus*



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Purple or Ribbed Tea mite -
Calacarus carinatus



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Purple or Ribbed Tea mite -
Calacarus carinatus



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***Calacarus carinatus* cast off
skins**



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