



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.

Smoke Tree

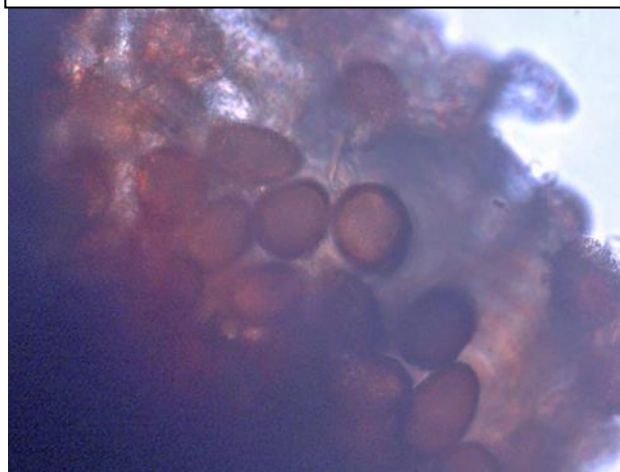
Smoke Tree, *Cotinus coggygia*, sometimes called Smoke bush, is a large deciduous shrub growing 12-15 feet tall and wide. It is grown for the frothy, fluffy buff-pink summertime bloom clusters from which it gets its name, and for the colorful foliage of the purple leaved cultivars. The attractive, round smooth leaves are blue green to purple depending on cultivar. Annual pruning produces the best foliage color, but at the expense of the smoky bloom as the plant only blooms on wood 3 years old or older. Fall color is spectacular with shades of yellow, red, orange, or purple. Smoke Tree grows best in full sun in well-drained, infertile soils. However, it is tolerant of a wide range of soil types and pHs. The most serious disease of Smoke Tree is Verticillium wilt. This is a soil-borne disease that causes branch dieback, and eventual tree death. There is no cure. Smoke tree occasionally gets leaf rust, caused by *Pileolaria cotini-coggygiae*. Smoke Tree rust is an autoecious macrocyclic rust meaning it has only one host and all five spore stages occur on that one host. Necrotic spots on the top of leaves and pustules on the underside are indicative of Smoke tree rust. Multiple pustules can cause puckering, leaf distortion, and tissue death. Any fallen leaves should be raked up and removed from the planting. Fungicides containing azoxystrobin, or propiconazole, or triadimefon, or myclobutanil, or flutolanil, may be used for rust.

Smoke Tree rust- *Pileolaria cotini-coggygiae*



Sherrie Smith University of Arkansas Cooperative Extension

Smoke Tree rust urediaspores- *Pileolaria cotini-coggygiae*



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Smoke Tree rust- *Pileolaria cotini-coggygiae*



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Sherrie Smith

Azalea by Brant Smith

Lace bugs are a common pest that has a broad host range: azalea, rhododendrons, broad-leaved evergreens and many deciduous trees and shrubs. *Stephanitis pyrioides*, the azalea lace bug, is one of the more economic damaging pests to plants in the heath family. First symptoms on azalea are yellow, chlorotic spots on upper leaf surfaces. Leaves develop silvery or chlorotic symptoms that are similar to mite symptoms. As symptoms become more severe, leaves can become a gray blotched appearance or completely brown. A distinguishing symptom of azalea lace bugs is the brownish black varnish-like droppings (frass) on the underside of leaves. The lace bug completes its life cycle in leaf tissues; overwintering in the egg stage. Many life cycles are completed as season progresses; starting in early to mid-May and peaking infestation numbers in July. Most lace bug problems occur in bright, sunny areas. Lace bug infestations can be avoided by planting susceptible plants in shady areas. Spraying with a hard jet of water can dislodge nymphs from the leaves (Often dying before they can make their way back). Encouraging natural predators of the lace bug is important. Green lacewing, mites and assassin bugs all attack lace bugs and generally keep the population in check. Since biological control is useful for controlling lace bugs infestations, the use insecticides that generally aren't harmful to beneficial insects. Insecticidal soaps and oil are effective contact killers. When applying these chemicals, it is important to cover the underside of the leaf where the nymphs are feeding.

Azalea Lacebug frass- *Stephanitis pyrioides*



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Azalea Lacebug damage- *Stephanitis pyrioides*



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Azalea Lacebug - *Stephanitis pyrioides*



Tracy Wootten, University of Delaware, Bugwood.org

Cultural control consists of removal of all fallen leaves and scabby fruit, and the avoidance of overhead irrigation. The best preventative is planting resistant cultivars.

Apple Scab symptoms top of the leaves – *Venturia inaequalis*



Juliet Fultz, University of Arkansas Plant Pathology Graduate Student

Apple by Juliet Fultz

The disease, Apple scab, infects susceptible apples and crabapples wherever they are grown. It is most prevalent during seasons of wet, cool springs. Apple scab is caused by the fungal pathogen *Venturia inaequalis*. Twigs, leaves, and fruit may all be infected. Leaf lesions may be sporadic throughout the tree, or in severe cases, be present on every leaf. Lesions first appear as new leaves are emerging in the spring. The spots are velvety brown to olive colored with feathery edges. Severely infected leaves turn yellow, shrivel, and fall from the tree prematurely. Apple scab infection can result in yield loss due to dark brown to black, circular scabby lesions on the fruit. Infected fruit can become deformed and cracked. Preventative measures involve the use of a fungicide routinely from the emergence of the first bud to the last fall of flower petals. Pristine, Captan, Vangard WG, Rubigan EC, Sovran 50WG, Dithane Rainshield F-45, Dithane Rainshield DF, Eagle 20EW, and Fontalis are labeled for control of Apple Scab. Follow label.

Apple Scab symptoms bottom of leaves – *Venturia inaequalis*



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Apple Scab symptoms bottom of leaves – *Venturia inaequalis*



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Hackberry Nipple gall– *Pachypsylla celtidismamma*

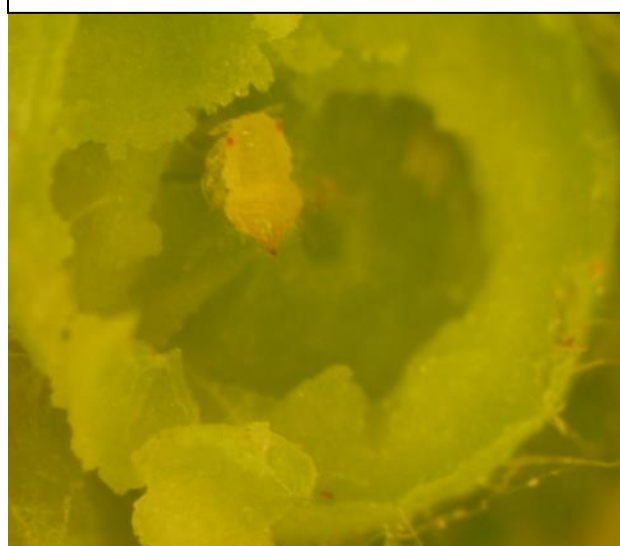


Archana Khadgi, University of Arkansas Plant Pathology Graduate Student

Hackberry Gall by Archana Khadgi

Sometimes we see the abnormal growth of plant tissues on underneath of the leaf surface, which is known as gall. Plant galls can be caused by a variety of organisms including nematodes, bacteria, fungi, viruses and one family of mites. Psyllids are one of the most important groups of gall producers in plants. One of the major galls of Hackberry is called Hackberry Nipple Gall caused by the psyllid *Pachypsylla celtidismamma*. This gall appears as a swelling on the underside of the leaves and measures about 1/8 to 1/4 inches. When the gall is carefully cut, we can see the developing psyllid inside the gall. Hackberry psyllid galls are not of economic importance as they do not cause any harm to the plant. However, if any treatment needs to be applied to control the galls, it should be done prior to the formation of gall as the treatment may kill the psyllids but the galls will not go away. Pruning the extensively galled part of the plant can also be a good option to minimize the number of psyllids.

Hackberry Nipple gall– *Pachypsylla celtidismamma*



Sherrie Smith University of Arkansas Cooperative Extension



Request for help from Dr. Robbins:

Root knot nematode populations are needed for our Arkansas species study. I am a nematologist in the department of Plant Pathology in Fayetteville. My student and I are trying to amass populations of as many species of Root knot nematode (*Meloidogyne* sp.) as possible for species identification using molecular techniques. At present no root knot species in Arkansas have been identified using molecular technology. We are interested in receiving populations from home gardens, shrubs, flowers, trees and grasses. For samples we need about a pint of soil and feeder roots in a sealed plastic bag that is plainly identified by plant host, location (City County, physical address, collector and date of collection). Please send samples to us at the follow address:

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