



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.

Pyracantha

Pyracanthas are grown mostly for their decorative red or orange berries. They are susceptible to Fire blight, caused by *Erwinia amylovora*. All members of the rose family except stone fruits are susceptible, including pyracantha, pears, apples, crabapples, photinia, cotoneaster, quince, hawthorn, roses, blackberries, and raspberries. Infection occurs during bloom, as insects carry the bacteria from blossom to blossom, and from plant to plant. Blooms wilt and die a few weeks after infection. Infections spread down the twig, sometimes into a main branch. Young infected shoots form a typical shepherd's crook as they wilt. The dead tissue turns either brown or black depending on the species of plant involved. Susceptible trees should be sprayed at green tip, at 5% bloom and at 50% bloom with Agri-strep, Agri-mycin or a copper fungicide such as Kocide. All dead tissue should be pruned out 10 – 12 inches below the damage. Cutting tools should be dipped between cuts in a 10% bleach solution, (nine cups water to one cup bleach) or in 70% alcohol. Apache, Fiery Cascade, Rutgers, Teton, and Shawnee have resistance to both Scab and to Fire Blight.

Pyracantha Fire blight-*Erwinia amylovora*



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Lisianthus

Lisianthus or Eustoma are herbaceous annuals that are native to North American prairies, as well as areas of northern South America and Mexico. The nursery trade has developed many color varieties as well as double flowering cultivars. Although they tolerate hot, dry conditions, they perform best in rich, moist soil. A disease commonly found on Lisianthus is Cercospora Leaf Spot, caused by the fungus *Cercospora eustomae*, synonym *Pseudocercospora eustomatis*. Leaves develop circular yellowish tan-brown spots that become almost felt-like with masses of spores. Spores are approximately 20-60 μm long and 3.5-6 μm wide. Products containing chlorothalonil, or triflumizole, or myclobutanil, or trifloxystrobin, or azoxystrobin, or propiconazole, or triadimefon, or krexsoxin-methyl, or pyraclostrobin may be used. Homeowners may use Spectracide Immunox, or Fertilome Liquid Systemic Fungicide, or Ortho Max Garden Disease Control, or Fertilome Liquid Fungicide, or Green Light Fung-Away Fungicide, to name a few.

Lisianthus Cercospora Leaf Spot spores-*Cercospora eustomae*



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Lisianthus Cercospora Leaf spot -*Cercospora eustomae*



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Pecan

Phylloxera are tiny, cream colored to pale yellow insects related to aphids. Their feeding activity stimulates the plant to produce galls on leaves, stems, and nuts. There are three species of Phylloxerans found on pecans in Arkansas. The most damaging species is *Phylloxera devastatrix*. They produce large, green galls on stems, twigs, petioles, midribs, and nuts. When the galls are opened this species is found to have wings. The Pecan Leaf phylloxera, *P. notabilis* produces small galls next to midribs or secondary veins of the leaflets. The galls are globular to ovoid, open on the underside of the leaf, green on top, and usually reddish beneath when first

formed. *P. notabilis* is also winged. The third species, the Southern Pecan Leaf phylloxera, *P. russellae* forms small, round, flattened galls between the secondary veins on the leaf surface. The galls are open on the underside of the leaf and have a reticulated pattern on their surface. The opening has dense, short, white hairs. These phylloxeras are not winged. The galls of all three species turn brown as they age. A single egg overwinters within the body of a dead sexual female. These eggs begin hatching about the time the buds begin opening. The nymphs move to the open buds and begin feeding. A gall forms around the feeding insect. When the female reaches maturity, she begins laying eggs within the gall. When the eggs hatch, they feed within the gall, developing into wingless and winged females. They emerge from the galls and are dispersed within the tree and to nearby trees. They lay eggs on the upper and lower leaf surfaces. The eggs hatch into both males and females. They mate almost immediately, and a single egg forms within the body of the dying female. The egg hatches the following spring to repeat the cycle. Control of phylloxerans must start at bud break. Products containing imidacloprid are effective. Commercial growers may use Centric 40WG, or Lorsban, or Moveto, or Provado 1.6 F, or Trimax Pro, or Warrior. Control is usually not practical for homeowners.

Pecan Phylloxera –*Phylloxera devastatrix*



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Pecan Phylloxera –*Phylloxera devastatrix*



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Sycamore Anthracnose –*Apiognomonia venta*



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Sycamore

The most damaging disease of sycamore is Sycamore anthracnose, caused by the fungus *Apiognomonia venta*. Symptoms appear on new leaves as they unfold. Black to brown lesions occur along veins, eventually enlarging to cover the entire leaf. Twigs may be killed back 8 to 10 inches. Sunken cankers may develop on the main trunk and limbs. During cool wet weather in the spring these cankers become active and produce spores that infect new leaf buds. Death of individual twigs and limbs occurs when a canker girdles them. Repeated twig death results in a witches broom type of growth, with a mix of dead and live twigs in clusters. Treatment begins in the spring as buds begin to swell. Fungicides containing chlorothalonil, or thiophanate methyl or copper should be applied at 7-14 day intervals as long as cool wet weather persists. It is difficult to treat large trees. Planting resistant cultivars and species is the best option. The American sycamore is extremely susceptible. Susceptibility varies among cultivars of the London plane tree with, Bloodgood, Columbia and Liberty having resistance to anthracnose.

Sycamore Anthracnose –*Apiognomonia venta*



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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