



Sherrie Smith

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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.

Cherry and Plum

Black knot of cherry and plum is a serious disease throughout the United States. The fungus affects fruit spurs, twigs, and branches. Infection typically occurs on the newest growth. Abnormal growth of bark and wood tissues produces small, light-brown swellings that eventually rupture as they enlarge. In late spring, the rapidly growing young knots have a soft texture that becomes covered with a velvety, olive-green growth of the fungus. In summer, the young knots turn darker and elongate. By fall, they become hard, brittle, rough and black. During the following growing season, the knots enlarge and gradually encircle the twig or branch. The cylindrical or spindle-shaped knots may vary from one-half inch to a foot or more in length and up to 2 inches in diameter. Girdling by the gall causes death of the twig or branch. Small twigs often die the first season they become infected. The most important control measure is pruning out the infected twigs and destroying them, removing wild plums and cherries from adjacent fence rows, and fungicides applied from bud break to early summer.



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Maple



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Maple anthracnose is a common fungal infection in years with cool wet conditions at the time new leaves are emerging in the spring. Anthracnose is usually most



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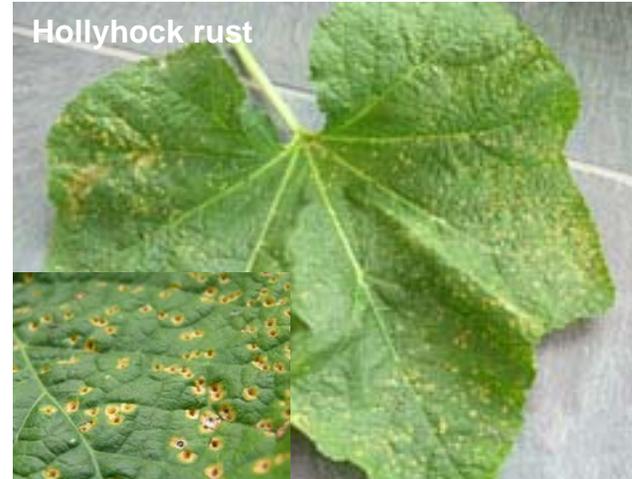
Rick Cartwright

noticeable in the bottom leaves of the tree but may become widespread in favorable weather. Black lesions on or next to the veins are diagnostic and there is often leaf curl and distortion of the newest leaves. Severe infection can result in extensive leaf drop. Healthy trees will put on new leaves by early summer and are not seriously threatened by this disease. Therefore, the best control for anthracnose is to maintain good tree health. Trees suffering from anthracnose should be fertilized in the spring and kept well watered throughout the season to reduce stress. Sanitation also is very important in minimizing infection the following year. This is because the fungus over-winters within fallen leaves and twigs. In the spring, splashing rain carries the spores to newly emerging leaves and the infection cycle starts over. All fallen leaves and twigs should therefore be raked up and destroyed. Fungicide applications may be made to trees with a history of severe defoliation early in the spring when buds first begin to open (MP154) although this may be difficult depending on the size of the tree. Spraying is of no benefit once the tree has leafed out and is showing symptoms.

Rust on ornamentals

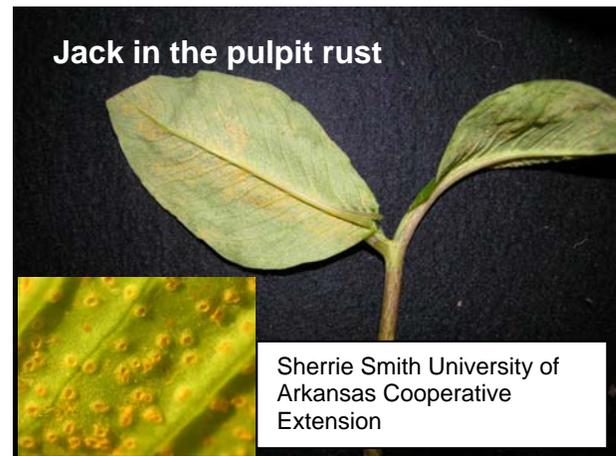
Herbaceous ornamentals have been coming into the clinic with rust. Hollyhocks are a favorite cottage garden plant that is prone to hollyhock rust. Hollyhock rust rarely kills the plant, but severe infections cause yellowing and early leaf-fall. The fungus attacks all green parts of the plant in the early spring or autumn. The disease first appears as lemon-yellow to orange pustules on the underside of the lowest leaves. The pustules resemble small blisters that turn reddish-brown with age. The rust can spread quickly to stems and other leaves.

Another common rust seen in the spring is jack-in-the-pulpit rust. It attacks the underside of the leaves causing yellowing and early leaf drop. Control of both types of rust involves removing infected leaves and destroying them at the first sign of infection. When plants are finished blooming flower stalks should be cut down and destroyed. Good sanitation is necessary as rust spores over-winter on the ground in plant debris. Fungicides listed for ornamentals give good control if applied early as a protectant, however you should always read and follow label directions to make sure the product is approved for use on a particular ornamental plant and especially read all caution statements.



Hollyhock rust

Utah State University Extension



Jack in the pulpit rust

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Slime Molds

During the spring and summer, we get numerous reports about a "nasty" substance growing in spots in the yard (photo). Sometimes these spots are jelly-like, but later turn dry and powdery on the blades of the grass. Often they are bluish gray or similar colors, but may be orange, yellow or other colors as well. They may erupt overnight, and are especially common in wetter areas or after extensive periods of rain or overhead irrigation. These patches are formed by slime molds, a microscopic organism that feeds on bacteria and swarms around looking for them in grass and decaying organic matter. Once the swarm of slime mold cells



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have eaten enough bacteria, they congregate into many small "slugs" which crawl up onto grass blades and form a stalk with spores on top (closeup photo). The spores are then spread around by splashing water, wind or mechanical movement (mowers, walking). Slime molds are a natural part of the environment and are not harmful. If unsightly, you can simply wash them away with a garden hose.



Slime mold spore masses - Closeup
- Rick Cartwright



Slime mold patches - Rick Cartwright

WHEAT SOOTY MOLD

We are seeing the first evidence of sooty mold on wheat heads that have been prematurely killed by spring freeze injury, barley yellow dwarf and other conditions. When a wheat tiller is prematurely killed by "whatever" in the spring, the carbohydrates that should have gone into the grain become available to various fungi that naturally live on the surface of the plant. These "saprophytic" fungi grow rapidly on the killed heads, consuming the unused carbohydrates and most of these fungi produce abundant, dark spores – thus the term sooty mold (photo). There is no recommended control since these fungi do not affect living, healthy wheat.



Sooty mold of wheat - Rick Cartwright

Fire Blight

Fire blight is a common and destructive bacterial disease of pome fruit trees and related plants. Pears are extremely susceptible, but apples, quince, crabapple and pyracantha are also attacked. Infections can destroy limbs and in severe cases the entire tree or shrub. The disease appears in the spring as soon as the plant begins active growth. A light tan bacterial ooze seeps from twig and branch cankers formed by infection the previous season. Bacteria from these previous cankers are moved by insects, rain, etc to flowers which become infected. As the infection moves into and down the stem, they turn black and wilt, forming a "shepherd's" crook.. Blackened leaves and stems cling to branches



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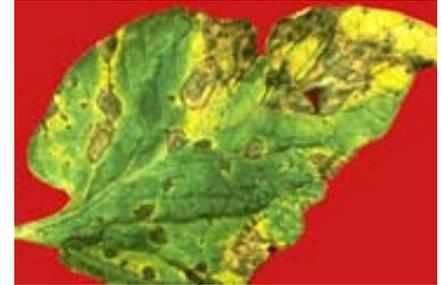
the rest of the season unless carefully pruned out. Pruning is the most important control measure and diseased branches should be cut 10-12" below visible signs of disease, carefully carried away from susceptible trees and destroyed. Pruners should be dipped in 10% bleach between each cut to prevent spreading the infections further. Trees with a history of fire blight can be sprayed the following spring at bud break with streptomycin (Ag Strep, Ag Streptomycin, Streptrol, etc) or oxytetracycline (Mycoshield) (www.cdms.net or www.greenbook.net) to attempt to prevent or reduce the disease – however success may vary greatly depending on the susceptibility of the tree, the weather, spray coverage and timing. Copper fungicides have been reported to have some effect but you should read all warnings and cautions on these products before trying. Remember to read and follow all label directions before use.



photo 2-21 - K. D. Hickey

Early Blight of Tomato

We are starting to receive samples of tomato with early leaf symptoms of early blight, caused by the fungus *Alternaria solani*. This is a very destructive disease of tomatoes each year in Arkansas, and will cause many of the leaves to drop as well as spots on stems and fruit at times. Many commonly grown tomato varieties are susceptible to the disease, so fungicides (MP154) may be your only option. You must catch the disease early and keep the fungicide on all leaves consistently to do the best job of control. Lesions of early blight on leaves form characteristic "target spots" and may be surrounded by yellow regions as the infection develops.



(Photo by R.C. Lambe)
Source: Mary Ann Hansen,
Virginia Tech Univ.