



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.

## Sycamore

The most serious disease of sycamore is Sycamore anthracnose, caused by the fungus *Apiognomonia venta*. The first symptoms appear on new leaves as they unfold. Black to brown areas occur along veins, eventually enlarging to cover the entire leaf. Twigs may be killed back 8 to 10 inches. The main trunk and branches may develop sunken cankers. During cool wet weather in the spring these cankers become active and produce spores that infect new leaf buds. If the cankers girdle the branch, death of the branch occurs. 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*



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Sulfur can also be used but be warned that it can burn foliage if applied when temperatures are high.

## Hollyhock rust-*Puccinia malvacearum* (upper leaf)

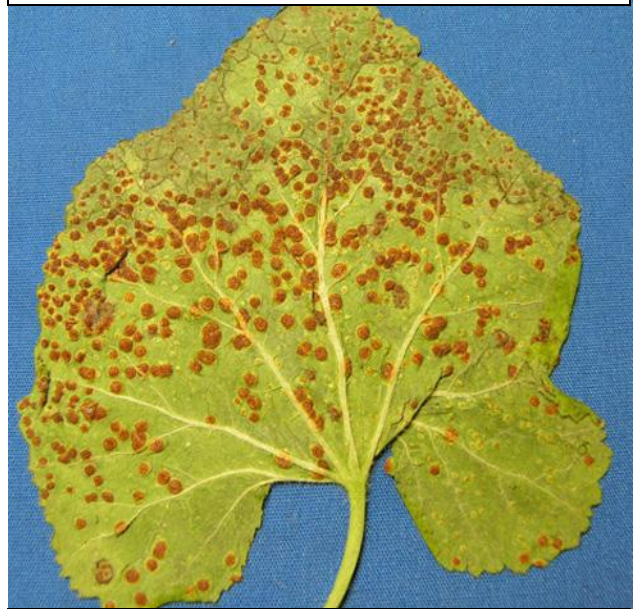


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## Hollyhock

Every year at this time the Plant Health Clinic receives samples of hollyhock covered with rust. The causal agent is the fungus *Puccinia malvacearum*. Malva and hollyhock species are susceptible. A common Malva weed, *Malva rotundifolia* serves as a reservoir for the disease. Symptoms are numerous yellow to orange spots on the upper surface of the leaves. The undersides of the leaves become rather dramatically covered with large orange to brown pustules. Heavily infected plants may also have the pustules on stems and green flower parts. Left untreated, the disease can become severe, resulting in most of the leaves being killed. Good sanitation is critical to control Hollyhock rust. Infected leaves should be removed immediately they are noticed. In the fall plants should be cut to the ground and burned or otherwise disposed of, along with any leaves left on the ground. Fungicides should be applied early in the spring at new growth. Products containing chlorothalonil such as Daconil, or Mancozeb, or myclobutanil should be applied through early July.

## Hollyhock rust-*Puccinia malvacearum* (underside of leaf)



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## Euonymus

Euonymus is quite susceptible to Powdery mildew, caused by *Microsphaera euonymi-japonici*. Powdery mildew is favored by periods of cool night temperatures, high humidity, and poor air circulation. Plants are often infected in spring or fall. Symptoms are grayish-white patches or spots on both surfaces of leaves and stems. Tender new growth may be distorted. Badly affected leaves may turn yellow and fall from the plant. Euonymus suffers less from Powdery mildew when planted in sun with good air circulation. Ornamental fungicides may be used at 10-14 day intervals to suppress Powdery mildew. Products containing chlorothalonil will suppress Powdery mildew. Bayer Disease Control for Roses, Flowers, Shrubs is a systemic that is effective if applied early.

### Euonymus Powdery Mildew- *Microsphaera euonymi-japonici*



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## Bean

Potyriviruses infect a broad range of host plants, both monocots and dicots, in most climatic regions. Severe economic losses have been known to occur in bean crops. These viruses are transmitted by aphids in a non-persistent manner. Bean Common Mosaic Virus (BCMV), Bean Yellow Mosaic Virus (BYMV), Clover Yellow Vein Virus (CYVV), Cucumber Mosaic Virus (CMV), Peanut Mottle Virus (PeMoV), and Soybean Mosaic Virus (SMV), are the Potyriviruses commonly associated with bean crops. Specific symptoms are dependent on the specific Potyrivirus involved, but are often associated with mottling, necrotic and chlorotic lesions, leaf curling, leaf distortions, stunting, poor pod set, vein necrosis, and epinasty. Viruses are not curable. Since Potyriviruses are spread by aphids, scouting and insect control are important. Infected plants should be destroyed to limit spread to nearby healthy plants.

### Potyrivirus symptoms on bean



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