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CLINIC NEWS

Issue-24, August 6, 2018

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.



The Plant Health Clinic now has a Facebook page:

<https://www.facebook.com/UAEXPlantHealthClinic/?pnref=story>

Maple

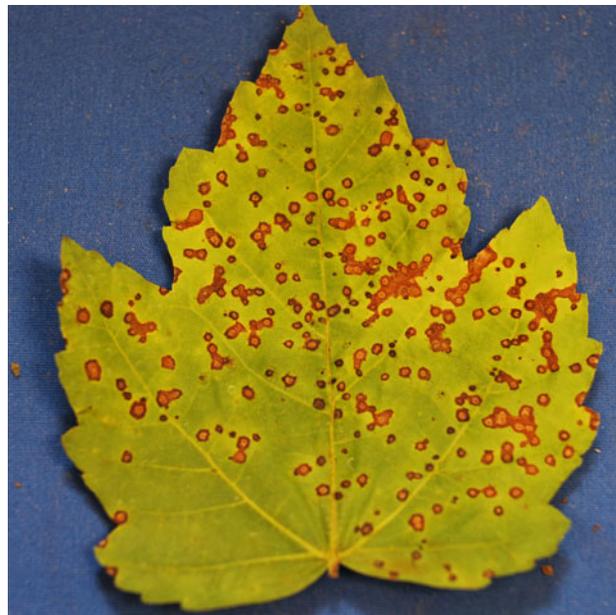
The fungus, *Phyllosticta minima*, produces a leaf spot on maple, but does not cause the defoliation that Maple anthracnose causes. Symptoms are raised tan to dark brown leaf spots. Young lesions may have a lighter center. The dark pimple like structures of the fungus may be seen using a hand lens. Older lesions may dry and fall out leaving a shot hole in the leaves. The disease over-winters on fallen leaves. In the spring spores are produced that are carried by wind and rain splash up to the new foliage. It is important to rake up and destroy all fallen leaves. Don't leave them on the ground over the winter. Although chemical control is usually not needed, small trees may be protected with applications of a fungicide containing chlorothalonil.

Maple *Phyllosticta* Leaf Spot- *Phyllosticta minima*



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Maple

Phytophthora belongs to a group of organisms commonly known as water molds. They are found in soils that remain saturated for long periods of time, and can cause diseases such as root and collar decay, stem and trunk cankers, foliage lesions, and fruit rot. Roots are infected through infested soils. Infections of above ground parts of the plant are thought to occur from the pathogen being moved upward by rain and irrigation splash, or possibly insect vectors. Although several species of Phytophthora have been associated with bleeding cankers, including *Phytophthora cactorum*, *Phytophthora ramorum*, and *Phytophthora inflata*, *Phytophthora cactorum* is the most common causal agent for bleeding cankers in trees. American and European Beech; sweet birch; flowering and Pacific dogwoods' sweet gum; horse-chestnut; linden; red maple; silver maple; sugar maple; Norway maple; sycamore; live oak; pin oak; red oak, tulip tree; weeping willow; avocado; apple; citrus, are some of the susceptible hosts among over 80 genera. The pathogen commonly enters through wounds or succulent new growth. Trees that are stressed are more susceptible. Symptoms of Phytophthora bleeding canker are decreased size and numbers of leaves, yellowing, branch dieback, and a darkened, bleeding canker on the trunk, usually on the lower trunk. The trunk cankers are generally elongate, with the sapwood and phloem stained reddish-brown underneath the cankers. Prevention is the best defense as treatment is difficult once disease occurs. Trees should be planted where they will receive adequate water, but have good drainage. When in doubt about when irrigation is necessary, moisture meters (tensiometers) are a valuable tool. It is best not to allow sprinklers to spray water on the trunk, but to use irrigation hoses or drip lines. If the root flare is not visible, removal of soil, mulch, and ground covers is recommended. Fertilize per soil test for that particular species and do not overuse nitrogen fertilizers. Badly affected trees are unlikely to recover and should be removed. Allette, Subdue, Adorn, Stature, Banrot, and Allude are labeled for treatment of Phytophthora in ornamentals. These fungicides may not be cost effective for most homeowners. Check individual labels for rates and for use on specific hosts.

Maple Phytophthora Canker- *Phytophthora* sp.



Image courtesy of Jessica Rice

Physocarpus (Ninebark)

Physocarpus is a native shrub with lovely exfoliating bark. They prefer sunny to lightly shaded locations with a slightly acidic soil and adequate moisture. They grow three to 12 feet tall depending on cultivar. Leaf color ranges from green to purple to copper to gold, also depending on cultivar. Ninebark have attractive bloom and fall color. They are deer and drought resistant and require little maintenance once established. We see few disease problems, but some cultivars are susceptible to Powdery Mildew. Symptoms begin as small powdery white spots on leaves, stems, and flower structures. The spots spread to cover the surface of the affected tissues. Light pink to white colored, thickened shoots with



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stunted leaves (Witches' brooms) may also occur. Powdery Mildew infections may lead to leaf death and premature defoliation. High humidity and poor air circulation favors disease development. The best defense is to plant resistant cultivars. Susceptible cultivars include Dart's Gold, Morning Star, Nugget, Center Glow, and Coppertina. Witches' brooms and infected stems and leaves should be removed. Fungicide sprays containing myclobutanil, or thiophanate-methyl, or sulfur, or triadimefon are labeled for control of Powdery Mildew in Ornamentals. Homeowners may use Fertilome Broad Spectrum Lawn and Garden Fungicide, (chlorothalonil), or Hi-Yield Vegetable, Flower, Fruit, and Ornamental Fungicide, (chlorothalonil) or Ortho Maxx Garden Disease Control, (chlorothalonil), or Ortho Disease B Gon Garden Fungicide, (chlorothalonil), or Garden Tech Daconil Fungicide, (chlorothalonil), or Bonide Fung-onil Multipurpose Fungicide, (chlorothalonil), or Spectracide Immunox Plus, (myclobutanil & permethrin), or Bonide Rose Rx Systemic Drench, (tebuconazole), or Bayer Advanced Garden-Disease Control for Roses, Flowers, Shrubs, (tebuconazole), or Bayer Advanced Garden-All-in-One Fungicide/Insecticide/Fertilizer, (tebuconazole & imidacloprid), or Fertilome 2-N-1 Systemic Fungicide, (tebuconazole & imidacloprid), or Bonide Infuse Systemic for Turf and Ornamentals, (thiophanate-methyl), or Ortho Rose and Flower Insect and Disease Control, (triticonazole & acetamiprid).

Ninebark Powdery Mildew- *Podosphaera aphanis* var. *physocarpa*



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Mimosa

Mimosa trees are common trees in the south. Although often seen as a weed, many people value mimosa for their pink flowers and the tropical look they add to landscapes. The biggest disease problem with mimosa is Mimosa wilt, a vascular wilt caused by *Fusarium oxysporum* f. sp. *Perniciosum*. Symptoms are leaf yellowing and leaf wilt by midsummer. Most infected trees die branch by branch over several months, but some die within a few weeks of starting to wilt. Almost all infected trees die within a year of first wilting. In advanced stages, infected trees ooze a frothy liquid from cracks and grow sprouts on trunks. Brown streaks are observable in roots and branches. This is a soilborne disease, and unfortunately, not much can be done for a tree with vascular wilt. Never use high-nitrogen fertilizers. A balanced fertilizer (10-10-10) may help alleviate symptoms in infected trees that are not too far-gone. Infected trees should be watered frequently to decrease wilt symptoms, and dead branches should be removed and burned. Two wilt-resistant varieties are available, Charlotte, with light-colored flowers, and Tryon, with deeper red flowers.

Mimosa Wilt- *Fusarium oxysporum* f. sp. *Perniciosum*



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**Mimosa Wilt- *Fusarium oxysporum* f.
sp. *Perniciosum***



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https://nifa.usda.gov/sites/default/files/resource/Powerpt_usda_nifa_horizontal_rgb_300.jpg