

ANTHRACNOSE DISEASES OF DECIDUOUS TREES

Gleosporium spp. and *Apiognomonia* spp.



Figure 1. Damage by ash anthracnose causes brown lesions. Leaves and leaflets drop early in the spring.

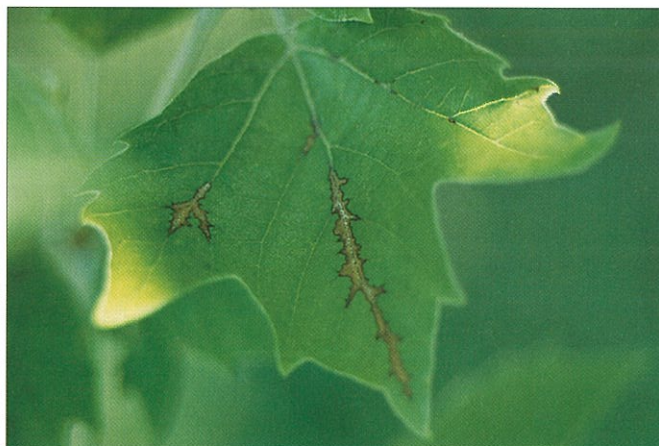


Figure 2. Symptoms of sycamore anthracnose disease are evident on newly expanding leaves.

Anthracnose diseases are caused by a common and destructive group of fungal pathogens that can attack various shade trees. Extended periods of cool, wet weather can make these diseases devastating and difficult to control with foliar applications of fungicides.

SYMPTOMS: Symptoms vary and are listed below by host.

Ash (*Fraxinum* spp.) – Brown areas with irregular shapes occur along the new leaves; brown blotches occur on leaf tips, veins and margins. Infected leaves drop prematurely in the spring (Figure 1). Twigs may be girdled and die, especially during cool, wet weather.

Maple (*Acer* spp.) – There are several fungi that cause anthracnose-type leaf spotting on maples. Foliar symptoms include brown vein lesions originating at the veins, to irregular browning of margins that extend inward.

Oak (*Quercus* spp.) – White oak is severely affected when new leaves are expanding and cool, moist weather occurs for a prolonged period. Leaves have large dead areas between the leaf veins, usually on lower branches. These leaves become twisted and droop with downward cupping. Twig and branch dieback may be evident the following spring.

Sycamore (*Platanus* spp.) – Areas along leaf veins turn tan to brown (Figure 2). As the fungus invades the leaf tissue it moves into petioles and stems. Buds turn gray-brown and wilt. Twigs and branches show discoloration around infected buds or exhibit dead sunken areas in the stems (cankers). Continuous years of infection cause severe canopy reduction and a witches'-broom stunting of branches.

CAUSE: The fungus generally overwinters in infected, dead leaves on the ground. With the sycamore disease, it also winters in the infected buds or twig and branch cankers. During cool wet springs, minute blister-like swelling in the infected tissues releases thousands of spores that are wind-dispersed to new leaves. These new infections cause death of the leaf tissues, which results in tan-to-brown dead areas. Varying amounts of leaf drop

take place, depending upon the severity of the disease that season. The inoculum is present to repeat the cycle the following year.

SOLUTIONS: Current recommendations for preventing or correcting anthracnose diseases of shade trees include the following:

1. Fertilize trees that have become infected, and water during dry periods. This will help the tree overcome the stress brought on by the disease and the resulting defoliation.
2. Rake up and destroy infected leaves, and prune off cankered branches to reduce the potential for infection.
3. Usually, a fungicide applied to tree foliage during leaf expansion will aid in minimizing leaf infection and defoliation. However, if the weather is cool and wet for prolonged periods of time, foliar applications may not provide satisfactory results.

For management of sycamore anthracnose disease on trees greater than 2 feet in diameter, trunk injections of Arbotect® fungicide are recommended. This treatment provides two years of disease suppression from one application. The trunk injections are effective even when there is cool, wet weather that favors disease development.