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## **Anthracnose -- diseases of shade trees**

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**Cause:** Anthracnose refers to a symptom rather than a specific fungus.

**Hosts:** Different fungi produce anthracnose on specific host plants, as shown in the table on pages 86-87. Many plant diseases and weather stress cause similar symptoms. Don't rely on symptoms alone. Confirm your diagnosis at by sending a sample to MSU Diagnostic Services, where microscopic identification of spores is used for a positive I.D.

**Symptoms:** In general, anthracnose symptoms are worse after cool, wet springs. Spores have an extended opportunity to wash from branch and twig cankers to new leaves and shoots.

### **Sycamore anthracnose**

Sycamore leaves with anthracnose develop brown lesions that begin along the leaf veins. Lesions enlarge and coalesce as infection progresses. Witches' brooms develop after repeated infection and dieback of twigs. Cankers may develop on twigs.



The amount of defoliation depends on the severity of the infection.

## **Anthracnose of shade trees - *continued***

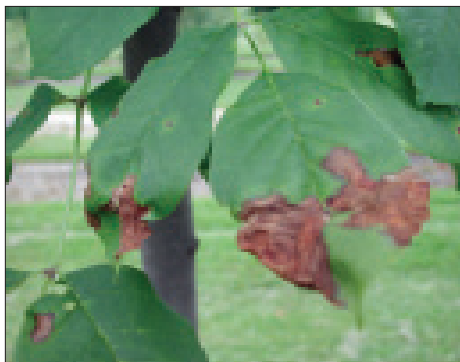


### **Anthracnose symptoms on white oak in spring:**

Anthracnose on oak usually occurs in the lower crown.

**Compare with oak wilt:** The early symptoms of oak wilt may appear similar, but appear in July and begin in the upper part of the tree.

### **Ash anthracnose symptoms.**



## **Anthracnose of shade trees - *continued***

**Management:** Sanitation is important in managing anthracnose. Rake up and destroy fallen leaves to reduce source of inoculum. Remove diseased and dead wood and prune trees to improve air drainage. Fungicides are usually not needed, but fertilization may help trees that are heavily defoliated.

### **Symptoms of anthracnose on maple.**



## Anthracnose of shade trees *continued*

Host	Sexual (S) Asexual (A) stages	Plant parts affected/ symptoms	Susceptibility/ resistance	Conditions favorable for disease
Oak	Apiognoma quercina (S) Discula quercina (A)	(A) Leaves and new shoots shivel or turn brown; leaves develop small brown spots or lesions near veins, twig dieback before budbreak in spring. (S) Overwinters on fallen leaves.	Most oaks. White and bur oaks are the most susceptible.	Wet weather in spring with temps in 64-82° F range.
Sycamore	Apiognoma veneta (S) Discula platani (A)	(S) overwinters on fallen leaves. (A) overwinters on infected twigs and bark- infects buds, new shoots, leaves and 1 yr. old twigs. Leaf lesions develop near veins. Chronic twig infections produce witches' brooms.	Sycamore and planetree are susceptible.	61-68° F + wet weather favors leaf infection; mid-50's around bud break favors shoot blight. (A) produces secondary infections during growing season.

Table continues on next page.

## Anthracnose of shade trees *continued*

Host	Sexual (S) Asexual (A) stages	Plant parts affected/ symptoms	Susceptibility/ resistance	Conditions favorable for disease
Ash	Apiognoma errabunda	Overwinters on infected twigs and leaf petioles. Water-soaked spots or brown blotches on new shoots and leaves; small oval-shaped cankers on twigs.	Green ash is more resistant than other ash species.	Repeating cycles of infection occur during wet weather
Maple	Kabatiella apocrypta, others	Young leaves and shoots shriveled, turn black. Older leaves develop lesions, usually near leaf veins	Norway, red, silver, Japanese, sugar maple, and boxelder are susceptible.	Cool, wet weather (50-55°F) in spring and/or summer.
Walnut	Gnomonia leptostyla (S) Marssonina juglandis (A)	(S) Overwinters on fallen leaves, rachises, husks. (A) Leaves develop small brown spots with yellow margins.	Black walnut, butternut	Initial infection in spring by spores from (S) transmitted by wind, rain; 75-79°F favors infection of leaves (A) produces repeating cycles of infection during wet weather.