

# CENTRAL HARDWOOD NOTES

## Sycamore Diseases

### Canker Stain Disease

The canker stain disease, one of several fungi that cause cankers of sycamore, can cause serious loss of sycamores in natural stands, plantations, and urban areas. As many as 35 percent of the trees in some stands may be diseased. Affected trees develop thin crowns, twig dieback, small leaves and epicormic branches. The narrow, elongate, bark covered, flat, spiraling stem cankers may be obscure (fig 1A). Probing the edge of a suspected canker with a knife will expose both bright-colored healthy and darkened diseased tissues. The "wedge" of wood beneath cankers will be dark stained.



Figure 1 .-Stem cankers of sycamore (A) edges of canker caused by the canker stain disease and exposed by scraping (B) canker and dieback caused by *Phomopsis scabra* (Sacc.) Trav.

Older cankers are marked by decay, insect, and bird damage. Trees may be killed in a few months to several years depending on their age. Canker stain can easily be transmitted mechanically to healthy trees. The spores may remain viable for months on tools that have been used to cut diseased trees. So, before you use these tools again on healthy trees, you should wet them thoroughly with a 1 :1 mixture of alcohol and laundry bleach. The only practical means of control are removal of diseased trees, sterilizing tools, and wound prevention. Injection of fungicides, excising or otherwise deadening cankers are not effective control measures. Some trees show tolerance to this disease but true resistance to canker stain has not been found.

#### Other Canker Diseases

Cankers caused by *Phomopsis scabra* (Sacc.) Trav., *Dothiorella* spp., and *Botryodiplodia theobromae* Pat. look alike and are usually visible on the stems. However, these cankers are easier to see when the stems are wetted. Cankers may be up to a few inches wide, a few feet long, and usually are associated with dead terminals or lateral branches (fig. 1 B). At first, canker surfaces are somewhat dark and slightly sunken, they then become completely dark with dead tissues and noticeably sunken after 1-2 growing seasons. The fungi produce inconspicuous structures in the darkened areas where spores are produced. Cankered trees may go unnoticed until small off-color leaves, dieback, or death prompts close inspection. The severity of the disease varies greatly depending on the interaction of host and pathogen, environment, and site.

Chemical treatment is not effective. To minimize losses due to these cankers, you should avoid wounding and stress while using cultural practices that maintain and promote tree vigor. Plant only on good sites using high quality nursery stock derived from certified local seed.

#### Sycamore Anthracnose

Anthrachnose is an important leaf disease caused by a fungus. The pathogen attacks the foliage when the leaves first emerge. Young leaves typically appear brown and wilted similar to frost damage (fig. 2A). The leaves may have irregular brown areas in the veins, midribs and leaf tips. Minute cream-colored spots will be produced on the underside of the leaves. Damage can also occur on twigs, which results in shoot blight and small cankers (fig. 2B). Severe defoliation will be followed by growth of new leaves. Outbreaks are more severe when spring temperatures are mild and rains prolonged. Leaf and twig infections decrease with increasing temperatures (above 60°F). Early fall defoliation may also occur when temperatures and rain favor disease development.

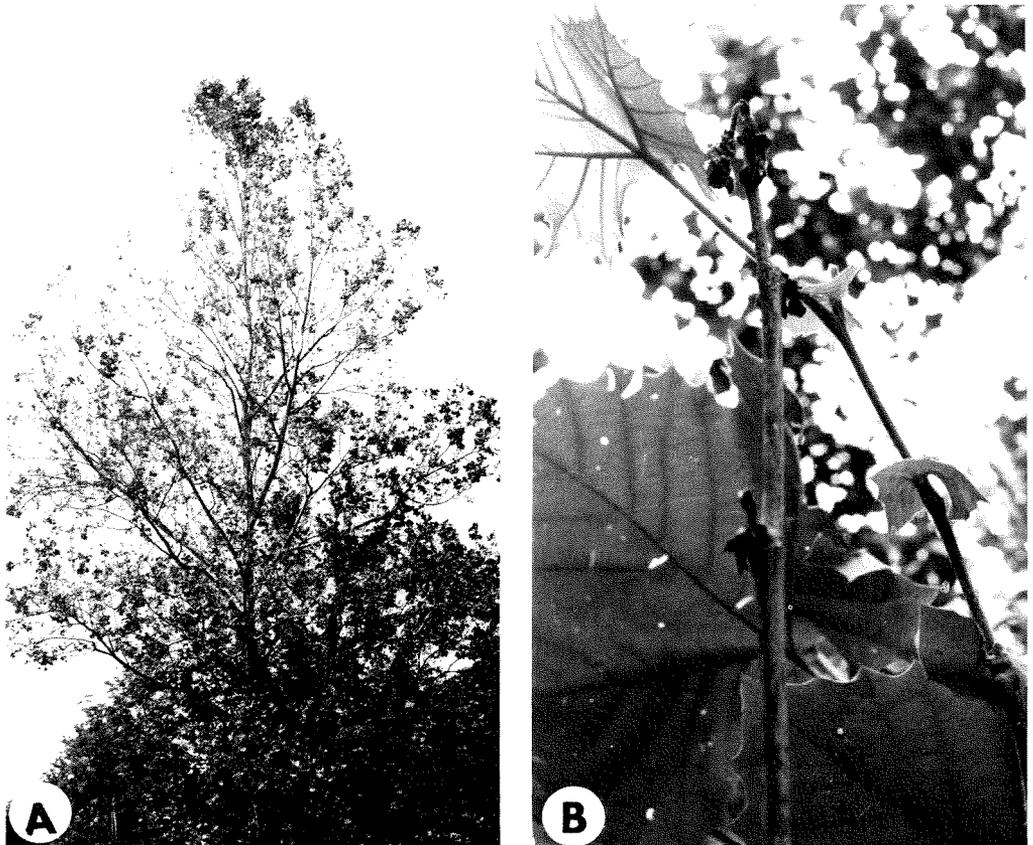


Figure P.--Sycamore anthracnose (A) spring defoliation (B) close-up of affected leaf and twig

Fungicide sprays can reduce severity but are not practical since frequent applications are required. Some seed sources show tolerance to anthracnose. Use cultural practices that maintain and promote tree vigor.

McCracken, F.I.; Burkhardt, E.C. 1979. Limiting canker disease losses of sycamore in the midsouth. *Southern Journal of Applied Forestry*. 3: 26-28.

Filer, T.H.; et al. 1977. Sycamore pests: a guide to major insects, diseases and air pollution. U.S. Department of Agriculture, Forest Service, Southeast Area, State and Private Forestry, and Southern Forest Experiment Station. 36 p.

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