

Hypoxylon Canker of Shade Trees

Dr. Green Thumb

Arkansas Gardener – November/December

By: Stephen Vann

Diagnosis

Hypoxylon canker may occur on several trees in the Arkansas landscape. Oak, sycamore, and elm are the most common shade trees affected. The most predominate fungal microorganisms associated with these cankers are *Hypoxylon tinctor* and *Hypoxylon punctulatum*. Both of these fungi occur primarily as opportunistic parasites that grow on stressed or declining hardwood trees.

Cankers are usually localized dead areas in the bark of the stem or twigs of our woody plants. These cankers are often recognizable by a sunken, dead area on the plant parts. In some canker diseases, the healthy tissues immediately adjacent to the canker may increase in thickness and appear higher than the normal surface of the stems. This growth results in a callus formation around the diseased area and thus limits disease expansion. Canker diseases can reduce tree growth, result in wind breakage, and weaken the trees so that other, more destructive, wood-rotting fungi can attack the tree. Most canker diseases on our shade trees are caused by various fungal microorganisms.

Symptoms

Most damage occurs on stressed or injured trees. Under humid weather conditions, cankers can rapidly enlarge to lengths greater than three feet. The fungus usually kills the cambium and portions of the sapwood. The bark often sloughs off in the affected areas, revealing a thin, “velvety” reproductive cushion or mat (stromata) beneath. This cushion is made up of fungal structures. The mat will release clouds of spores when disturbed. It is usually grayish at first and becomes dark brown with age. At a distance, this mat looks black. Areas on the tree develop a “charcoal” look to them. It often becomes visible several months after the underlying tissues die. These cankers can often girdle branches, creating a potential for breakage. Lack of vigor will predispose trees to infection. Infections occur through branch stubs and other wounds created on the tree. The gray or black canker areas often become quite obvious during November and December after the trees normally drop their leaves.

Prescription

Stress avoidance is the most effective management strategy. Homeowners need to promote vigorous plant growth by correct fertilization and irrigation. Fertilization should be based on routine soil testing. If practical, selective pruning should be done to remove dead or damaged branches from the tree, but a stress-weakened tree may redevelop cankers even after the initial areas are pruned out. It is important to avoid tree wounds. Machinery used around trees is often an important source of tree wounds. Tree removal may become necessary if structural integrity is questionable, especially if the tree poses a threat to buildings or other desirable structures. In urban areas, tree health may need to be evaluated by a trained professional in order to be maintained properly.

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