

on the twigs provides an abundance of inoculum for disease dissemination and inoculation.

We do recommend that, if you are in an area where sycamore anthracnose is severe, you plant the London planes instead of the American sycamore. The London plane may not have the same shape or quite the same growth characteristics as the sycamore, but it is closely related horticulturally and is an acceptable substitute. Also, when trees have been severely damaged by anthracnose, we recommend fertilizing and watering to hasten secondary growth and increase tree vigor.

Sycamore anthracnose has been subjected to more experimentation and more observation than

has any other shade tree canker disease, yet we cannot fully describe or explain it. We know little about how the causal fungus initially enters the tree or genetic resistance to it. When the government pulled the organic mercury rug out from under us, we were left without even a control recommendation. At the rate at which we are progressing on sycamore anthracnose, a scientist could concentrate all of his efforts on this one disease and still be guaranteed a lifetime of work, because there's still so much to learn.

*Section of Botany and Plant Pathology
Illinois Natural History Survey
Urbana, Illinois 61801*

ABSTRACTS

Shigo, A.L. and Alex Shigo. 1974. **Detection of discoloration and decay in living trees and utility poles.** USDA Forest Service Research Paper NE-294. Upper Darby, Pa. 11 p.

Discoloration and decay are major causes of damage to living trees, utility poles, and wood products throughout the world. They are caused by bacteria and fungi that digest wood inside of trees and poles, hidden from view. A method is described for detecting discoloration and decay in living trees and creosoted utility poles. The method and devices have come from research involving many people over a seven-year-period. A probe was inserted into a 3/32-inch diameter hole made by drill bits 8 inches and 12 inches long mounted in a portable, light-weight, battery-operated drill. The probe was attached by a flexible cable to a portable, light-weight, battery-operated meter, a "Shigometer", that delivered a pulsed electric current and measured resistance to it. As the probe was inserted into the hole, the meter measured in ohms the resistance of the wood in contact with the probe tip. As the probe was pushed inward, if the tip contacted only sound tissues, slight changes in resistance were measured. When the probe tip passed from sound wood to discolored or decayed wood there is an abrupt decrease in resistance. The magnitude of the decrease in resistance indicated the degree of discoloration or decay. The depth of the probe when the needle on the meter began to decrease indicated the position of the discolored or decayed wood.

Loomis, R.C. and W.H. Padgett. 1975. **Air pollution and trees in the East.** USDA Forest Service State and Private Forestry, NE and SE Areas. 28 p.

The benefits from trees are not limited to the rural countryside. Their importance in urban areas is recognized today more than ever. Among other benefits, they provide esthetic settings, cooling shade, and protection from wind, dust, and noise. Air pollution levels are high enough in some areas to cause plant injury. This is true not only in and around some of the larger cities, but also in rural areas where large pollution sources are present. The air pollutants discussed in this publication are sulfur dioxide, oxidants, fluorides, ethylene, oxides of nitrogen, ammonia, chlorine and hydrogen chloride, and particulates.