For the most part the sycamore tree is used as an ornamental in North America. The two most common species of sycamore used as ornamentals in the Northwest are the American Sycamore or Plane-tree and the Maple-leaved Plane-tree, which is sometimes thought to be a hybrid between the American and Oriental species. Sometimes one finds a variety which is more or less half-way between these two species. The Maple-leaved Plane-tree often passes as the true Oriental Sycamore, which latter is a native of Europe and Asia.

The sycamore tree is apparently subject to very few diseases, but the most common and destructive disease is the leaf- and twig-blight or anthracnose. It is said that this disease is prevalent throughout eastern and central United States and California, but recently it has become of rather serious consequence in some portions of western Oregon. The most severe damage is done to the American Plane-tree where the twig blight and canker types of the disease may seriously deform the tree. Certain trees may be more or less affected every year, but the blight occurs in epidemic form only during seasons when weather conditions in early spring are favorable for the development of the fungus. The Maple-leaved Sycamore which is commonly known locally as the Oriental Plane-tree, suffers from the leaf blight mostly and to a minor extent from the canker type of the disease. In most serious cases where American Sycamores are affected, repeated defoliation may cause considerable ultimate damage where leaf- and twig-blite occurs for several successive years. Generally, however, trees which are repeatedly affected show great recuperative power and may produce a second crop of leaves year after year.

Symptoms

Leaf blight may become noticeable early in the spring as the leaves begin to expand from the buds. The tiny leaves may turn brown and die as they emerge from the buds. As a rule, however, the first symptoms are brown blotches or spots of long irregular shape following the main vein of the leaf. These blotches may increase in size, merge into one another under favorable circumstances, and most of the leaf tissue may be involved. In severe cases the affected leaves may fall apart along the veins, or if the infection reaches the leaf stem the whole leaf will fall. In severe cases like this the whole tree may be defoliated. New infections, however, take place only during rainy or foggy weather, and so for the most part in western Oregon the blight will be severe only during the spring months. If the infection of a leaf or twig reaches back into the parent twig a canker may be formed at the base of the bud or at the base of the
twig. In these cases usually the bud and the original infected twig die completely and the parent twig may die if the canker girdles it. Where fair sized twigs are nearly girdled, new branches may appear around the canker causing a sort of broom effect. Where these are numerous in the tree a sort of brushiness is produced, giving an undesirable appearance to the tree.

**Cause**

Leaf- and twig-blight of sycamore is caused by a fungus (Gnomonia veneta) which grows parasitically within the tissue of the leaves and twigs. The fungus may overwinter in the leaves and cankers and from this over-wintering fungus the spores are discharged which infect the new leaves the following spring.

**Control**

If this disease is common on the sycamore in a locality the first step in its control must be sanitation or the elimination of the spore-producing material in the tree and its immediate vicinity. All the leaves from affected trees should be carefully raked together and burned. During the dormant period of the tree all the dead portions and cankered twigs and branches should be pruned out and burned. This is a tedious operation and unless care is taken many infected twigs may be overlooked. Since nearly all if not all of the cankers and blighted twigs occur on branches less than 1 inch in diameter, practically all sources of infection in a tree would be removed if before spring one trimmed out of larger trees all of the wood less than 1 1/2" in diameter. In this way the shape of the tree will be preserved and new growth can be protected by spraying. If in the pruning process any twigs are overlooked they will become apparent as soon as the leaves are out in the spring and they should be removed at that time. Twigs left until that time, however, have had a chance to disseminate spores and start the primary infection of the leaves. If these sanitary precautions are thoroughly carried out for all of the sycamores in the district, the amount of primary infection may be considerably reduced, or under weather conditions adverse to the development of the fungus it may be entirely eliminated.

In the eastern part of the United States where this disease has been severe, it has been successfully controlled by spraying. Bordeaux mixture applied thoroughly with a power sprayer so that all the leaves are covered will prevent further infection of the sprayed foliage. The number and time of applications depend upon weather conditions. An application of Bordeaux 4-4-50 should be made in the spring just after the leaves begin to unfold. This should not be very long after the buds begin to burst; but should be given before the first leaves are half grown. Since tests have not yet been carried out in Oregon it is not known whether or not this one application will be sufficient under our climatic conditions. If there are later spring rains it may be that an extra application or two will be useful in protecting leaves that unfold after the first spray.