

Arboretum Elms

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If you take a walk around the far side of Parker Lake in McBride Arboretum, you will see two young trees with labels American Elm, *Ulmus americanus*. This is the tree struck by Dutch Elm Disease in the early 60's. I doubt if I have seen one anywhere else.

American Elm, also known as white elm, was a very popular shade tree used to line the streets of cities in the Eastern US. It grows well in moist soils in valleys and flood plains. The fast growing tree can reach 50 to 70 feet high and according to Audubon Field Guide has "many spreading branches, drooping at ends."

A quick perusal of the *Audubon Society Field Guide to North American Trees* shows that this tree is easy to identify by the leaves and the fruit. The 4 to 6 inch leaves are simple and alternate in two rows. A distinctive feature is one side of the leaf being longer at the base. The leaves are also serrated or sawtoothed with straight parallel side veins. They are hairless with dark green on top and paler underneath. They turn gold in the fall.

The fruit is also distinctive. Before the leaves appear, the trees have very small (about 1/8 inch) greenish flowers. The fruit developing from these flowers in a flat oval (about 3/8 to 1/2 inch) with a notch in the end and will be in clusters similar to the winged fruit of maple trees. The seed, in the center of the fruit, can be seen through the thin pod.

The bark of the tree is light gray with deep furrows and scaly ridge. Twigs are brown, slender and hairless. The trunks of a mature tree can be 4-5 feet in diameter.

Along with wide use as a shade tree, American elm was also valuable as for its wood which OSU *Ohio Trees* calls "heavy, hard, strong, tough and difficult to split." It was used for furniture, paneling and construction.

A history of the Dutch elm tree disaster can be found in "Return of the American Elm" by Bob Bricault of Michigan State University Extension. Apparently elm logs shipped from Europe to the United States carried the European elm bark beetle. The beetle carried a fungal disease of elms called *Ophiostoma ulmi*, Dutch elm disease. It was first found in Ohio in 1930 and spread from state to state. By the 1960's it had killed millions of trees which is why I had never seen one.

Bricault tells of the search for elm trees resistant to Dutch elm disease. He mentions two cultivars “Valley Forge” and “New Harmony” that are showing promise. These were developed at U.S. National Arboretum.

He also mentions research on developing hybrid trees by crossing European and Asian elms. Cultivars are being evaluated in 15 states. In our area, Purdue University, Ohio State University and Michigan State University are conducting the studies.

I asked Mike Heydinger, McBride Arboretum board member and volunteer, if the trees at McBride were hybrids. Fellow board member and volunteer John Blakeman assured him that these were not hybrids. They are cultivars developed in Delaware, Ohio from trees that had survived. They have been bred and cross bred until they are resistant to Dutch Elm Disease.

So the next time you take a walk a McBride, take a close look at these two trees. There is hope that will once again be shade producing elms in our landscape.