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Botanical Focus: A series of articles on the flora of the Cooks Creek Watershed

The American Sycamore (*Platanus occidentalis*)

By Alan Miller


Durham sycamore

The most indelible and evocative tree of the winter landscape in the Cooks Creek watershed is the American sycamore, *Platanus occidentalis*. Majestic in form with is irregular muscular limbs and ghostly in color with its pale exfoliating bark, it is an unforgettable feature of our stream-sides and bottom lands. Many locations along Cooks Creek host irregular rows or copses of these remarkably individual trees. Each mature sycamore seems entirely its own creature to the point that it is hard to define the general habit—or form—of the species except that it is relatively open and variable.

Like so many common names, the name sycamore is misleading and troublesome. To the ancients, sycamore meant the fig, *Ficus sycomorus* and their *Platanus* was the plane tree; to Europeans, sycamore means the maple Acer *pseudoplatanus,* and to us it means this large *Platanus* which we also locally call buttonwood, American plane tree, and buttonball tree. The best way to describe this family of trees around the world is by their Latin name or the general and accurate name, plane tree, from the Greek root meaning wide. All seven or so—there is some dispute as to the number—members of the *Platanus* genus are North and central American with Mexico and the American southwest the center of geographic distribution, except for the Eurasian *Platanus orientalis* and its hybrid offspring crossed with our subject, *Platanus x acerifolia*, the London plane tree.

When North American plants began to be introduced into Europe in the seventeenth century, according to Stephen Spongberg's *A Reunion of Trees*, the British gardeners to Charles I, John Tradescant the father and John the son established their own garden to increase their pallet. The younger Tradescant (1608-1662) traveled to Virginia several times to collect specimens and returned with our American sycamore to South Lambeth in England, apparently to be planted in the same garden with their collection of Eurasian plane trees. Pollen goes where it will and pollen from one species fertilized the ovules of the other species and this first garden origin interspecies hybrid with Platanus parents from either side of the Atlantic was the result. Earlier stories of the origin of the hybrid London plane tree suggest a Spanish or French location for the first hybridization but Spongberg's case is compelling.

The Eurasian plane tree figures prominently in history and myth. According to the classical scholar, Robert Graves, the plane tree was associated with the Goddess and shrines and temples to her char-

acteristically were built near these trees. The Greek historian Herodotus tells that the Persian emperor Xerxes, while leading his armies on a march, came across a wonderful plane tree near the river Meander. The tree so moved the emperor that he had it hung with gold ornaments and directed gardeners to care for it through generations as long as it lived. In his opera Serse (Xerxes), Handel depicts this scene in the famous and beautiful aria *Ombra mai fu*, "no shade more sweet than thy shade, oh dear beloved vegetable." Not many trees can boast of this kind of treatment. In his 1663 book on trees, Sylva, John Evelyn rhapsodizes about the plane tree, "the incomparable and shady *Platanus*, that so beautiful and precious tree which we read the Romans brought out of the Levant and cultivated with so much industry and cost, for its stately and proud head only, that they would irrigate them with wine instead of water; and so prized the very shadow of it…" Plato's academy was said to have taken place under a plane tree.


Gumballs on young sycamores

The American sycamore has not accumulated this much lore unless there exist Native American myths and legends not known to the author, but it is almost certainly the largest and likely the most stately member of the *Platanus* genus. It is potentially the largest tree of our area and of the whole eastern United States and the largest deciduous hardwood tree in North America. The largest tree in this area known to the author is the Friedensville sycamore, with a chest high circumference of over 24 feet, a huge spread, and lateral branches as big as other large trees. David Culross Peattie's A Natural History of Trees of Eastern and Central North America, published in 1948, includes a wonderful chapter on the sycamore and informs us that the largest American sycamore on record grew on an island in the Ohio and was measured by George Washington at a chest high circumference of 44 feet four inches. Many years later in 1802, Francois Michaux measured its circumference at 47 feet, twice that of the Friedensville tree. This staggers the imagination. Huge virgin forest sycamores stood in stream and river valleys as the European settlers moved west. These giants are almost all gone now. They were often hollow and were used as animal shelters and dwellings. Sections of the hollow trunks were used as barrels and slices of solid trunks were used as wagon wheels. Sycamore wood was used in the colonial era for furniture and structural timber. It does not split and must be sawn in order to be harvested as lumber. In New England and Dutch New York this wood was occasionally the primary wood for case furniture and tables; in Philadelphia, it was used in sofa and easy chair frames. Sycamore wood resembles beech, but with even more prominent and regular flecks—or medullary rays. In the industrial age, sycamore was used for boxes, Saratoga trunks, and Pullman railroad car fittings.

The range of the American sycamore extends from Maine and southern Canada across the eastern and central United States and into northern Mexico. The genus Platanus is the sole member of the family Platanaceae. Platanus occidentalis, the American sycamore is monoecious, meaning that individual trees bear both male and female flowers. These inconspicuous blooms develop at the same time as the leaves in round bundles. The fruit is a round syncarp—a collection of many fleshy fruits — and these balls, like small Christmas ornaments, hang singly on the American sycamore and persist into winter. Sycamores grow rapidly and are not a good choice for planting in a small area. Anthracnose, the bane of our flowering dogwood, Cornus florida, also attacks sycamores, although they usually just develop new leaves if the first leaves fall to this disease. Sycamores always seem to be shedding something—bark, twigs, or fruit—and are considered to be messy in a yard. They do not typically have strong fall color—usually a yellowish brown—and their leaves are late to emerge in spring, but for those who appreciate the beauty of trees, who cares? No native tree in our area rivals their combination of powerful and poetic form and bark color.

