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Osage-orange Trees in Forest Hill Park and Their History

Carolyn Paulette

If you frequent Forest Hill Park, you probably have noticed two young trees with softball-size, bumpy green fruits growing near a much larger and older tree which dominates the grounds near the Stone House. I can recall from 1958 to about 1995 another of these large trees which dropped its green fruits near the corner of Forest Hill Avenue and 41st St. If the outer rind broke, white latex oozed and left seeds from the center of the fruit. The old tree that still stands is a male, and the one that bore fruits was a female. The male tree, however, can bear seedless fruits. Dennis Allen, the grandson of Hobby Edwards who was the first park superintendent after the amusement park became a public park in 1933, remembers sunrise services at Easter and playing croquet under the shade of the giant tree. These mystery trees with the orange streaks in their bark and yellow centers are Osage-oranges.

Early explorers discovered the Osage-orange (*Maclura pomifera*) in a limited habitat in southwest Arkansas, southeast Oklahoma, and north Texas growing along the Red River. Named for the Osage Indians who used their dense wood to make hunting bows, the trees were some of the first cuttings that Lewis and Clark sent back to President Thomas Jefferson in March, 1804 just before their expedition left Missouri to map out the Northwest Passage. (Musselman and Reveal 8) One of the largest species of trees found in the United States, the Osage-orange's early uses and evolutionary origin provide an interesting story of a tree native to North America which is a ghost from the Pleistocene Era,

the last Ice Age, 13000 years ago, when woolly mammoths, saber-toothed tigers, ground sloths and a total of 40 other species of large mammals roamed the continent and fed on the Osage-orange's huge green fruits. (Bronough, 3)

Seven Osage-orange trees that are over 200 years old can be found in Philadelphia in the churchyard of St. Peter's Episcopal Church. They are believed to have been grown from some of the cuttings that Meriwether Lewis sent to Thomas Jefferson in a second shipment in September, 1806 after the expedition returned to St. Louis. President Jefferson forwarded them to Bernard MacMahon, America's first nurseryman in Philadelphia. MacMahon grew some Osage oranges in front of his shop which was located across the street from St. Peter's Episcopal Church. The genus of the tree, *Maclure*, was named in honor of William Maclure (1768-1830), president of the Academy of Natural Sciences of Philadelphia and known as the father of American geology. (Musselman and Reveal



Osage orange fruit.

5)

Other notable specimens of the giant trees grown from the same Meriwether Lewis seedlings may be found at the University of Virginia and at George Washington’s River Farm in northern Virginia. (Munger 3) A fourth tree of significance on the East Coast can be found at Patrick Henry’s home, Red Hill, near Brookneal, Virginia where he retired and lived from 1794-1799. Its age has been estimated conservatively, at 300 years. (Hugo 41)

Joseph Musselman and James Reveal in their article, “Osage Orange, *Maclura pomifera*,” believe the age of the Red Hill tree raises some questions about how the Osage orange seeds were dispersed a thousand miles from their native habitat some 40 years prior to the settling of the land along the Staunton River in Virginia. They consider that the “most plausible explanation rests on archaeological evidence that Indians were living on the banks of the Staunton River in the vicinity of Red Hill by at least 1670.” (Musselman and Reveal 7) They speculate that because of the tree’s value in building hunting bows (One bow could be traded for a horse and a blanket), cuttings were “passed along the North American Indian trade network,” and one ended up on the site where Red Hill was built and provided Patrick Henry shade to play his violin between 1794 and 1799.

Because settlers valued the wood for fence posts, they continued to grow the tree to fence in the prairie and to provide protection from wind and snow storms. Barbed wire displaced their use as fence posts in the late 1800s. (Hugo 41) In the 1930s during the Great Depression, F. D. Roosevelt had the WPA workers plant thousands of Osage oranges to slow erosion in the dust belt. Despite being an anachronism from 13000 years ago when megafauna such as the Mammoths and Sloths roamed North America during the Ice Age, human predators found a use for the tree and spread it across the continent into Canada and 39 states by the end of the 20th Century. Though humans hunted to extinction the large mammals, they were instrumental in naturalizing the Osage-orange throughout North America. (Bronough 3)

In 1940 the American Forest Foundation established the American Forests National Big Tree Program to register champion trees. Both the Osage-orange tree at Red Hill and the one at River Farm are listed on the register as both state and national champions. Our own Osage-orange in Forest Hill Park compares favorably with these two champions (See chart below.). Being 103 points less than the points for the Red Hill and River Farm champions indicates that it must have been planted later than they were or at least the dying crown may have decreased the number of points. Still, it is a beautiful and old tree that reminds us of how precious old trees are in our landscapes and should be saved.

Perhaps the Forest Hill Osage-orange is another descendant of Meriwether Lewis’s cuttings, or a souvenir of someone who traveled west of the Mississippi and brought home a souvenir, or even a planting of a Native Indian horticulturist who knew its value for making bows. Whatever the source of its naturalization to our park, we are thankful.



The gnarled old trunk could be the cover of a fairy tale book or perhaps a book about forest fairies.

Chart of 2 Champion Trees from the American Forests National Big Tree Program Compared with the Forest Hill Osage Orange tree:

Characteristics:	Red Hill	River Farm	Forest Hill
National Champion?	Yes	Yes	No
Virginia Champion?	Yes	Yes	No

Circumference?	328 “	333 “	216 “
Height?	65 ‘	58’	72’
Crown?	93 ‘	91 ‘	60 ‘ approx.
Points?	416	414	303
Date last measured?	2017	2009	2018
Measured by whom?	Eric Wiseman and David Fornella	James Powell	Carolyn Paulette and Mary Godsey

Formula to determine Points: Circumference in inches + height in ft. + ¼ of average crown spread in ft. 328” + 65 ‘ + 1/4 of 93’ = 416 Points

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The old Forest Hill Osage-orange tree has lost part of its crown, perhaps to age. Maybe a City arborist could help it live for another generation or two.

A Rose by Any Other Name Would Be More Welcome

Multiflora Rose (*Rosa multiflora*)

Rosa multiflora is native to Asia and was first introduced to North America in 1866 as rootstock for ornamental roses. During the mid 1900s it was widely planted as a “living fence” for livestock control. *Rosa multiflora* thrives in Forest Hill Park. It appears harmless, but it is an aggressive non-native with wicked thorns.

This multistemmed perennial shrub grows up to 15 ft. (4.6 m) tall. The stems are green to red arching canes which are round in cross section and have stiff, curved thorns. The leaves are pinnately compound with 7-9 leaflets. Leaflets are oblong, 1-1.5 in. (2.5-3.8 cm) long and have serrated edges. The fringed leaf stalks of *Rosa multiflora* usually distinguish it from most other rose species.

The flowers are small, white to pinkish and 5-petaled . They occur abundantly in clusters on the plant in the spring.

Fruit are small, red rose hips that remain on the plant throughout the winter. Birds and other wildlife eat the fruit and disperse the seeds.

Rosa multiflora forms impenetrable thickets in pastures, fields, and forest edges. It restricts human, livestock, and wildlife movement and displaces native vegetation. It tolerates a wide range of conditions allowing it to invade habitats across the United States.



Park Champions



A sweltering June 30th whittled down our volunteers to a group of five, but they did not let the weather stop them from helping our native plants and trees in Forest Hill Park.



Come with us September 22nd when we go on a **Walking History Tour** of Forest Hill. Meet us at the Stone House at 9:30 to view old photos. We will step off at 10:00 for a two hour stroll through our notably historic neighborhood. Hear about a plantation and mansions and people who occupied them. The cost is \$15 per person; no charge for members of Friends of Forest Hill Park. (FFHP is a 501© 3 organization.)

