MEMPHIS BOTANIC GARDEN
Home of the Goldsmith Civic Garden Center

Under the Oaks
ARBORETUM NEWSLETTER

VOLUME 29

Learn About a Tennessee Native. Visit our State Champion Trees.
Read a Tale of the Maple-Leaf Oak.

Nyssa sylvatica - Black Tupelo

Article and Photo By Linnea West, MBG Tree Team

In Scandinavian lore, '*Nyssa*' is an elusive sprite, wreathed in mystery; 's*ylvatica*' means 'of the woods'. This graceful tree shows its varied nature throughout the Memphis Botanic Garden.

Three *Nyssas* grow in youthful exuberance in full sun close to the beehives in the Original

Arboretum (located in the southwest corner of the Garden). Throughout the Woodland, *Nyssa sylvatica's* dark, furrowed trunk and branches gracefully curve to reach for sunlight - most strikingly over Neptune's Lagoon by the koi bridge. The brilliant red, orange, and yellow of its fall foliage reflect in the water.

One of our largest *Nyssas* grows by Audubon Lake (located in the northeastern corner of the Garden), twenty yards back from the southwest shore. Branches spreading wide, the nearly 50-foot tree glows in fluorescent orange, red, purple, and yellow in autumn. During spring and summer, its 3" oval pointed leaves are a deep glossy green. Dark, almost black, bark and expressive branches give *Nyssa* a dramatic winter silhouette of a fairytale creature come alive!

Look closely at the twigs in winter and you will see plump purple end buds with overlapping scales. Below each small, alternately-arranged side bud, note a crescent leaf scar (where the autumn leaf fell off) and count 3 circular bundle scars – conduits of the tree's vascular system.

Native to the southeastern United States, Tupelo, the common name, comes from the Muskogee words *ito* (tree) and *opilwa* (swamp). This wood is often used for wildlife carving, lending itself to fine detail, as well as turned bowls, wheel hubs, tools, and furniture.

Delicious Tupelo honey is made by bees from the trees' tiny, clustered ½" yellow flowers. *Nyssa* is a polygamo-dioecious tree, meaning male and female flowered trees are separate entities, but if there are none of the complementary trees close by, a *Nyssa* can adapt and create flowers of the opposite sex on its own branches.

Nyssa's fruit is a ½" blue-black oblong drupe with a single hard seed. Birds and animals relish these fruits. (The occasional botanist has been known to enjoy them, as well.)
Throughout the year, *Nyssa sylvatica* is a joy to behold. The next time you open a jar of famously delicious Tupelo Honey, with Van Morrison's song flowing through your mind…. picture this glorious native tree!

State Champion Trees at MBG

Pictured above: Mexican Baldcypress (Taxodium mucronatum)

Article by: Judi Shellabarger, Urban Forestry Advisor, MBG Tree Team Volunteer

As you walk the grounds of Memphis Botanic Garden, glance up at the trees shading the pathways. The beauty of our largest plants is sometimes overlooked. The Memphis Botanic Garden became a Certified Arboretum in 2007 and has approximately 180 different tree species.

Twelve of those species are now 2022 Tennessee State Champion trees. They include Common Chinafir, Chinese Date Tree, Cedar of Lebanon, Dove Tree, Mexican Baldcypress, Atlas Cedar, Three-flowered Maple, Sourwood, Coffin Tree, Umbrella Magnolia, Little Epaulette tree, and Lusterleaf Holly.

Measured by height, circumference, and tree canopy width, these champions are the largest in the state and will keep that title until a larger specimen is located. Not all will have the height and girth of the Atlas Cedar or Common Chinafir. Some will remain small and unique like the Little Epaulette and the Dove Tree.

The Memphis Botanic Garden would love to add to our arboretum species list. Please consider giving a tree in honor or memory of a loved one.

Contact Mary Helen Butler at 901-636-4116 **maryhelen.butler@membg.org**

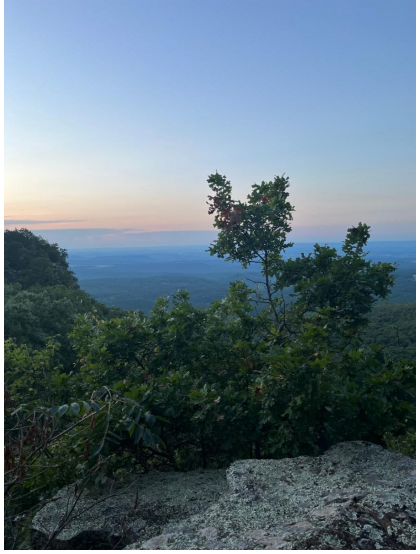
The Maple-Leaf Oak: One Story

Article and Photos By Bo Kelley, MBG Arborist

"Look closely at nature. Every species is a masterpiece, exquisitely adapted to the particular environment in which it has survived…"
– E.O. Wilson

For some 300 million years, a small mountain chain in west central Arkansas has faced the unrelenting force of erosion. Great peaks once towering as tall as the Himalayan mountains have been reduced to mere topographical folds, flat-topped mesas in the terrain rarely eclipsing 2,500ft above sea level. These are the Ouachita Mountains. Imagine as you read, a period of time long enough to shrink mountains, our idealized monoliths of permanence and strength. Along the way, the physical environment changed infinitely, altering what life might survive. Imagine all the forms of life that lived here in that time, each able to exploit their surroundings well enough to carve out an existence. In that immense period of time whose passage is virtually impossible to comprehend, countless ecosystems have formed within these mountains, weaving a quilted mosaic of ever-changing habitats and inhabitants. One species, just one of the immeasurable to exist here, occupying just a fraction of that time, is the Maple-leaf Oak (*Quercus acerifolia*).

I felt drawn to the Maple-leaf Oak and its story almost immediately. It's a story which, for me, was first built from a collection of excerpts from old forestry books and field guides (those that even bother to mention it) patched together with a basic understanding of ecology and evolution. Field guides tell you that it is a small, shrubby tree



of the Red Oak group reaching around 30ft in height, found growing in rocky soils within open woodlands at higher elevations, presenting a distinct leaf that resembles that of a Sugar Maple (Genus *Acer*). As a footnote, you'll learn that the Maple-leaf Oaks are listed as "endangered" on the IUCN Red List, a status that means they are believed to be diminishing from the planet. These oaks are known to only occur in the Ouachita Mountains, a band of elevated ridges running through parts of Oklahoma and Arkansas. In fact, only four populations have been discovered to date, each occurring on isolated ridgetops. To learn their story in this manner is somewhat academic and straight-forward–understanding through knowledge. Through this exercise, however, I felt some emergent property surface, more akin to feeling–understanding through heart. It resembled a form of reverence that is built upon an archaic bond, one that connects humankind to nature. One that today is infused with poignancy. As a result, I'm inclined to interpret the story of the Maple-leaf Oak through the lens of humility. It is a story of life where opportunity was neither wasted nor needlessly exploited, and the inevitable end has been met with grace. I felt compelled enough by the story of these little oaks to take a trip to the mountains to better understand the species, hoping to fill the blank spaces within my field guides as well as my perspective.

Given only a weekend away, I settled on visiting one well-known population found within Mount Magazine State Park, an obscenely accessible portion of the mountain range, replete with all manner of vacation accommodations. Fortune granted me the most isolated of the primitive campsites, sitting in a shallow nook overlooking the Arkansas River Valley, far (enough) from the shadow of the multimillion-dollar lodge and private cabins. Not more than 200 yards down the first trail, I came to the first of many Maple-leaf Oaks I would see on my trip, a tree growing less than 10 yards off a well-worn path. It was marked with flagging tape, neck tied by 3 or 4 strips, upon which read: "*Maple-leaf oak*;" "*Quercus acerifolia;"* and "*Champion*."

This was the national champion Maple-leaf Oak, potentially the largest and oldest of its kind, disguised as just another tree hidden among the hickories and redcedars. I want to say that I felt a bolt of awe-inspired realization, that some firm grasp on an ultimate truth took hold, that the tree spoke to me in an archaic language of a bond between oak and man and earth. But in the presence of that old scraggly tree, nondescript and adorned with a crown of vinyl tape, I was submerged, rather, by a wave of familiarity and empathetic understanding. Here was a tree like any other tree, with a story like any other. A tree who, regardless of its own merits or the status of its species, was living life both as an individual and as part of a collective, another member of a forest community. Right here, within earshot of a school bus brimming with children and a torrent of RVs, was just another tree.

That the Maple-leaf Oak exists at all is something of a miracle. Any other tree found here could have filled the niche occupied by *Q.acerifolia*, the "role" played by a species in an ecosystem. Remarkably, the Maple-leaf Oak evolved and held its place, likely for tens of millions of years. For one reason or another, the Maple-leaf Oak habitat is declining and with it, the species. Habitat loss is possibly due to fire suppression across the range, which limits the open habitat required for regeneration and deforestation during development of ridgetops for human settlement. Mount Magazine State Park has successfully married the refinements of civilization with forest management to ensure the survival of the oaks, but for how long cannot be known. The population here might be too small to generate enough genetic diversity, leading to a population that may not survive dramatic environmental change. At this point in time, the population survives. Through its eyes, it has watched

the mountains slowly shrink and humanity rapidly encroach through our flourishing civilization.

I sat on my last evening by a dying fire, the smoldering ashes triggering thoughts about this small species and the life it has lived on the planet. Every so often, an endangered species with enough publicity and merit becomes an “ambassador” for biodiversity (think Monarch butterflies, American bison, Siberian tigers). They serve as a rallying cry for humanity to band together around, shining a light on biodiversity and encouraging widespread conservation. It is doubtful the Maple-leaf Oak will carry that mantle, as it is neither the most endangered nor the most crucial in its ecosystem. It is likely meeting its end as a result of a changing world; a world that has changed since the dawn of time. In thought, I went down a trail; an overgrown pathway along the cliffside that I had ignored the entire trip. As I walked, I could hear crowds of people filing onto the paved overlooks a quarter mile down the ridge waiting to see the sunset, their bellies full from the all-you-can-eat buffet at the lodge. With the drone of humanity in the air, I emerged from the trail onto a rocky ledge perched above the valley, overlooking the same sunset the hordes clambered to see. I had been weighing what the story of this humble tree meant to me, how to feel about this one single species and its place on earth when I met, waiting at the end of the ledge and blissfully unaware of its demise or the impending doom upon the planet, a single Maple-leaf Oak. Thought faded and feeling emerged. Peacefully, we watched the sunset; me, and just another tree.

TUFC Native Tree Seedling and Sapling Sale

Saturday, November 5
9 am-12 pm

Fundraiser for West chapter Tennessee Urban Forestry Council

Cash or check only
$10 or less

Some native vines, shrubs, and grasses will also be available.

To read past issues of *Under the Oaks* visit the archive by **clicking here**.
