

What the Heck is an Arboretum Anyway – and Why is it So Darn Cool?

By Ken Leinbach, Executive Director, Urban Ecology Center

Ok, I'll admit it. When Pieter Godfrey discussed the idea of converting the land he wished to donate into a unique ecosystem of trees ... he and I had only a vague notion of what exactly an arboretum was. My instinct in calling it an Arboretum instead of a park was less biologic and more practical - a marketing tool. The name had the panache to attract attention and hopefully the support needed for the ambitious project of tearing down an old factory and reclaiming the worn industrial land into public green space. When the marketing plan started to work, and support started to pour in, it became evident that understanding the term Arboretum was important.

I have sometimes heard an Arboretum defined as a “living museum of trees”. Upon further investigation we have learned that while accurate, these “living museums” are as varied as the species that they embark to preserve. Arboreta (cool word in the plural, eh?) differ from natural woodlands as they represent a botanically significant intentional collection of trees. Some “living museums of trees,” like that in the nation’s capital, attempt to grow individual trees from all over the world. Others, like the Arboretum at Flagstaff, focus on the native plants that thrive in the arid environment of the Colorado plateau. While trees are common to all, arboreta in truth are botanical gardens for all plants, as a tree cannot survive in isolation. They need an ecosystem of support.

This then brings us to the Milwaukee Rotary Centennial Arboretum. What is it exactly? Over the past six years, with the engagement of thousands of volunteers, experts across the state, a dedicated team on staff and numerous partner organizations an exciting vision has emerged.

The Milwaukee Rotary Centennial Arboretum, which will open in September, will be a 40 acre tract of urban nature uniquely managed as an outdoor classroom, research site and public sanctuary free for everyone to enjoy. The National Forest Service has

already dedicated this land as a Children's Forest, meaning that the unique needs of children are considered in every step of design. For example, in our Arboretum there will be "Imaginature areas" scattered throughout the acreage — special places intended for children to "discover and play" be it a well placed hollow log, or a tree enhanced for safe climbing.

Collectively this land will harbor representative samples of every tree indigenous to Southeastern Wisconsin (there are 28 species in Riverside Park, soon we will have 72!), as well as a vast number of native plants and an impressive array of Wisconsin ecosystems.

Some of the land within the 40 acre boundary already exist as a mature forest, like that of Riverside Park. Other portions have trees, but are not currently managed with intention. The riparian land along the East Bank Trail as well as stretches of the Oak Leaf Trail near the Center fall into this category.

Perhaps the most interesting and exciting portion of the project is completely being built from scratch. This section of newly sculpted hills, where a factory and brickyard stood just six months ago, will be the gateway to the Arboretum. Visitors will park and enter through the 20 foot high stone archway being built between two long earthen berms hiding the magic within. A paved pathway designed to accommodate all people, including those in a wheel chair, will wind through these hills to the river. While the rest of the Arboretum will be closed canopy woodland (think Wisconsin woods with tall mature trees close together), this "new land" will be a re-creation of one of the most endangered ecosystems in the United States - the oak savanna.

At the time of European settlement oak savannas covered most of the lower half of Wisconsin (including parts of Milwaukee). Today less than 0.02% of the original ecosystem exists. Oak savannas amounted to about 50,000,000 acres in a mostly continuous band stretching along the eastern edge of the Great Plains from Texas (through Wisconsin) into southern Canada. Now there is hardly a trace left.

How is this possible? Where did it go?

To know where it went you first have to know what it is. An oak savanna ecosystem is essentially a very open forest — large trees (not just oaks) growing individually or in clusters amidst an impressive diversity of under-story plants. As described from in the 1800s:

“When the county was first settled there was no underbrush or small timber such as now exists. The timbered lands were open, the trees standing so far apart that hunters could see the deer at distances from one to five hundred yards.” — Joseph Mudd, 1888

“...clumps of oaks of centuries’ growth, tall grass, with seed stalks from six to ten feet high, tall and slender reeds waving in a gentle breeze, the whole presenting a magnificence of park scenery, complete from the hand of Nature.” — George Flower, 1817

The oak savannah is one of the most biologically diverse and beautiful of the Midwest ecosystems. Its diversity derives from being a composite of woodland plants, prairie plants as well as a few plants that are unique to the savanna like the giant yellow hyssop, purple milkweed, cream gentian and yellow pimpernel to name a few. Something is always flowering in a savanna and they teem with insect, bird and wildlife. This evolving and active ecosystem with well shaped mature trees (as they grow in full sun) dotting the landscape is pleasing to the eye and the soul.

As to where they went to — oak savannas were in the meteorological area of the country that we sometimes call tornado ally. Lightning storms in this section of the US produced frequent fires that only fire-resistant mature hardwood trees like oaks could survive. Native Americans would start fires as well to keep these lands open for game. In the spaces between these massive trees were grasses and prairie plants which, thanks to their deep roots, could regenerate after large fires. This unique open forest survived as a stable ecosystem for tens of thousands of years in a symbiotic relationship, oddly enough, with wild fires. When settlers arrived on the scene two things happened. First, it was discovered that these deep rooted plants over millennia had created incredible top soil making for some of the best farming

in the country. Second, people like to put out fires. In an amazingly short time frame with human suppression of fires and prolific cultivation the oak savanna quickly followed the buffalo to almost total extinction.

Our savanna, while small, will take time to develop into maturity (50 to 100 years in truth) but will be beautiful to watch evolve. From day one it will offer a multitude of wild flowers with sweeping vistas of the Milwaukee River Valley unlike anywhere else in the seven mile urban river corridor.

In total the Arboretum will boast over 2,200 new trees within its 40 acre boundary. Most of these will be planted outside of the six acre savanna in the areas managed for closed canopy woods. In the savanna, however, we will be planting 35 of our largest trees to give the ecosystem a good head start. Large means trees that are 15 to 20 feet tall with trunk diameters of four to five inches. At first they will seem small to the landscape, but in full sun they will soon grow into enormous, spreading, magnificent representatives of their species. It will truly be a gem in Milwaukee for generations to come.

So, are you excited? We certainly are! Want to get involved? There are so many ways! Come volunteer! We have weekly stewardship drop in times. Donate a tree. Watch progress from our tower and check out our website for more details!