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Spring 2024



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Cover: Landscape Specialist Matthew London at the prescribed burn in Iroquois Park last December. Read more about the burn on page 4.

Opposite: A rare crested coralroot orchid photographed by Lauren Hendrickson at Beargrass Preserve at Cherokee Park.

Right: An aerial view of Cherokee Park after the April 1974 tornado (photo by Billy Davis III). Read about the park's recovery on page 12.



ONE GOOD BURN

Prescribed Fire for Prairie Management

Liz Winlock

Director of Natural Areas

AS THE SUN DIPS LOW ON THE HORIZON, casting a golden hue over the faces of our fire crew, a palpable sense of satisfaction lingers in the air. Amidst the lingering scent of smoke and the weariness in our bodies, there's an unmistakable camaraderie born of hard work and shared accomplishment. With the successful completion of this prescribed burn, the landscape and crew alike find themselves enveloped in a quiet sense of relief. As the final embers smolder across the burn unit, a serene calmness descends, casting aside the tension and anticipation that once gripped us, leaving

only tired smiles and the promise of renewal in its wake.

Prescribed fire is a powerful tool for the management of urban prairies like Summit Field in Iroquois Park. Controlled burns promote biodiversity; remove invasive plants; return nutrients to the soil; increase ecosystem resilience by cultivating fire-resistant vegetation; and lower wildfire risk by reducing the accumulation of dry, flammable material. However, implementing a prescribed burn poses some challenges, especially in an urban setting with hospitals, highways, and a population of 1.1 million people.



Months before the fire at Summit Field in December 2023, work began with our burn boss to write a prescription outlining the fire's goal. We also had to note the very specific wind direction, speed, and height required to ensure all smoke would be lifted out of the Ohio River Valley. Our Team for Healthy Parks spent days working to create fire breaks to contain the burn. Almost a dozen different groups had to come together, including Louisville Parks & Recreation, Air Pollution Control District, Jefferson County Soil & Water Conservation, Kentucky Division of Forestry, local fire departments, the Regional Airport Authority, the Mayor's office and Metro Council representatives. Countless meetings, emails, calls, and text messages flew back and forth to plan, cancel, and replan this fire.

The morning of the burn, teams gather from Olmsted Parks Conservancy, Bernheim Arboretum, and Louisville Parks and Recreation's Natural Areas Team. We are all clad in layers of fire-resistant gear (Nomex, leather, and cotton), having been warned synthetic fibers can melt to our skin. The air is thick with anticipation as maps and burn plans detailing the landscape are distributed among the crew and safety protocols are reviewed and reiterated.

The energy builds as partners arrive, gear is distributed, and the crew fuels up with snacks and water for the long day ahead. When the burn boss stands up on the back of a trailer to begin the crew brief, every eye turns to him and the crowd is reverently quiet. We are assigned to two crews, and once more we review the plan. Then we set forth, boots crunching on the gravel; shovels, torches, and flappers in hand.

Opposite: Fire creeps across the prairie at Summit Field in Iroquois Park. Left: Conservancy staff and agency partners suit up in fire-resistant gear and keep the flames carefully contained.



At the ignition point, we spread out. This is the moment of truth. We check weather conditions once more. Radios crackle across teams and support vehicles. Then, lighters touch the torches. The ignitor began to slowly walk the fire line, dripping flames onto the dried grasses at our feet. The crew chats, but always keeps one eye on the fire and an ear perked for instructions from our burn boss.

First, the flames slowly creep along. Rabbits and birds dart out of the grasses. As the morning stretches on, the fire seems to find its rhythm. It dances with the wind, sometimes loping through the fuel, other times leaping into the sky with a hypnotizing *whoosh*. The crew rings the entire burn unit, ensuring the flames don't escape the safety of our fire breaks.

Late in the afternoon, the crew has worked entirely around the burn area. A ring of blackened fuel and smoldering embers ensures that the flames will move inward. Each team has set fire to opposite sides of the prairie, and now we must stand back. That black line is our safety net, and inside it the fire follows no rules. Suddenly, the drone of two small engines punctures the air. I realize with horror that a four-wheeler and a dirt bike* are riding through

*Four-wheelers and dirt bikes are prohibited off road in Iroquois Park for a number of safety reasons, even when the park is not on fire.

our fire breaks, directly into the unburned fuel. They're riding straight into the fire!

Panicked, I run across the fire break to put myself in front of the riders, hollering and waving my arms like I'm trying to scare off a bear. "It's *on fire!*" I scream. "TURN AROUND!"

They pause for a moment, looking around. After what feels like an eternity, they finally turn and ride out of the burn unit. The intensity of the interaction is echoed by flames meeting in the middle of the grasses, rising high above our heads and engulfing the fuel left there.

As the sun begins to set, the intensity wanes and the flames begin to subside. With each passing moment, the heat diminishes, and the landscape and crew breathe a sigh of relief. In the quiet aftermath, as the smoke dissipates and the ground cools, there's a deep sense of satisfaction and of catharsis, too. Today we witnessed nature's resilience as the rejuvenating flames cleared away the clutter of old growth, paving the way for new life to emerge. But perhaps most importantly, with this prescribed burn, humans and nature worked in harmony to ensure the health and vitality of the land for generations to come.





*Virginia bluebells near the
Nettleroth Bird Sanctuary in
Cherokee Park.*

Lauren Hendrickson
Natural Areas Specialist

SIGNS OF SPRING APPEAR AROUND

the parks: birds chatter, buds break, and spring ephemerals emerge from the leaf litter...Wait, is that a Dutchman's breeches blooming? *Already?*

If you have made similar observations while out enjoying the parks, you are not alone. While we appreciate the visual cues of changing seasons, plants are responding to subtle shifts in average daily temperature, increasing daylight hours and soil temperatures. Daylight changes at an expected rate, but temperature changes are highly variable, trending toward warmer temperatures in the early spring within eastern forests.

The [recent update of the USDA Plant Hardiness Zones](#) illustrates this shift, which comes with implications extending beyond our gardens and into surrounding woodlands.

Ephemeral flowers, known for their short blooming period and life cycle, serve as indicators of changing ecosystems. Traditionally, these plants follow a predictable flowering pattern during the spring season. Early bloomers, like Dutchman's breeches (*Dicentra cucullaria*), showcase this *temporal plasticity*, or variability, of when the herbaceous layer emerges in the woodlands each year. This "herb layer" is



Left: Spicebush in bloom at Cherokee Park. Inset: Wild hyacinth at Beargrass Preserve.

a vital component of the ecosystem, playing a crucial role in biodiversity and nutrient cycling, as well as providing habitat for insects, small mammals, and ground-nesting birds.

Studies reveal that various species, such as spring beauty (*Claytonia virginica*) and Virginia bluebell (*Mertensia virginica*), are emerging days or weeks ahead of their historical patterns. While these plants have adapted to natural climate fluctuations, increasing climate variability introduces uncertainty that can disrupt the reproductive success of these species. Changes in flowering times can also disrupt interactions between pollinators and later seed dispersers, potentially affecting all organisms involved in the intricate multi-species nutrient cycle.

Even within Louisville's Olmsted Parks, the same species may bloom days or weeks apart in different locations. The Team for Healthy Parks generally sees the first signs of spring ephemerals in Cherokee and Seneca Parks, in part

because of these parks' proximity to the urban center. Urban development and habitat fragmentation have produced an urban heat island effect, elevating temperatures in the urban core above those of surrounding rural areas.

These elevated temperatures are a key trigger for altered flowering timelines. Because of this, Iroquois Park, on the outskirts of the city, is the slowest to wake up in the spring. While you can observe tightly closed, green buds on spicebush (*Lindera benzoin*) there in early March, if you go to Cherokee Park on the same day, they are probably already blooming!

Another species that exemplifies this temporal plasticity around Jefferson County is wild hyacinth, or beargrass (*Camassia scilloides*). On the hillsides above Beargrass Creek, swaths of hyacinth bloom in early April and are dwindling by early May. In contrast, along the Wild Hyacinth Trail in the Parklands, the flowers don't begin blooming until early May. Situated closer to the county

Meet the Team



Matthew London

Landscape Specialist

***On Staff Since:** September 2021*

***Favorite Olmsted Park:** Central*

***Hobbies:** Reading, camping and painting*

Matthew came to Olmsted Parks Conservancy with a background in horticulture and a love for working with his hands. He developed an interest in plant identification while working as a horticulturalist at Bernheim Forest, which has served him well in his work in natural areas. As Landscape Specialist, Matthew works with the Conservancy's horticulture team to plan and maintain both formal and informal landscaping across the Olmsted Park System. He also works on developing natural play spaces and uses geographic information systems (GIS) to map assets. He enjoys getting to know the landscape around him, something his position offers ample opportunity to do.

border, this green space experiences fewer human disruptions from urban areas, contributing to a more natural ecological rhythm.

Warmer temperatures also cause certain tree species to leaf out earlier, engaging in competition with ephemerals that have evolved to complete their life cycles before leaf growth occurs. This evolutionary strategy allows ephemerals to harness the maximum available sunlight before tree leaves cast shadows on the forest floor, where other flowers are better equipped to capture light in partial or full shade.

While these changing ecological factors are difficult to mitigate, there are things we can do to help preserve habitats for these species. Limit soil disturbance by staying on trails and avoid using muddy trails, since ephemerals often have shallow root systems that are easily trampled or washed away by erosion. Invasive plant management also helps to ensure ephemerals have space in their environment.

Conserving the natural habitats of spring ephemerals and doing our part to address unfavorable conditions is crucial for the long-term sustainability of these unique plants. Olmsted Parks Conservancy staff and volunteers work tirelessly to mitigate disturbance and promote healthy, intact ecosystems for both present and future generations of people and plants.

**Want to help with
invasive plant management?
For information about volunteering,
contact Matt Spalding,
Director of Stewardship, at
matt.spalding@olmstedparks.org.**



Leaving a Legacy

Protecting the future of the Olmsted Parks

Danielle Archer
*Senior Director of Marketing
and Development*

FREDERICK LAW OLMSTED, the visionary landscape architect behind many of America's most iconic parks, understood the profound impact of investing in the future. While designing New York's Central Park, he wrote to his son:

"I have all my life been considering distant effects and always sacrificing immediate success and applause to that of the future."

Olmsted's words encapsulate thoughtful, forward-looking planning. Today, you can honor his legacy and contribute to the preservation of Louisville's historic green spaces by making a planned gift to Olmsted Parks Conservancy.

Olmsted Parks Conservancy is dedicated to restoring, enhancing, and forever protecting Louisville's historic parks and parkways. These parks serve as vital green respites within the urban landscape, connecting nature and neighborhood by providing spaces for recreation, relaxation, and community engagement. The Conservancy works to elevate the parks to bring the restorative power of nature to all. By making a planned gift to the Conservancy, you will ensure that the work of the Conservancy and these invaluable resources continue to thrive for generations to come.

Thinking about a planned gift now allows you to align your philanthropic values and your long-term financial planning. By prioritizing the future

well-being of the Olmsted Parks, you demonstrate a commitment to environmental stewardship, historic preservation, and community enrichment. This strategic approach to giving ensures that resources are allocated efficiently and sustainably, maximizing the impact of your charitable contributions over time.

When you include Olmsted Parks Conservancy in your estate plans through a bequest, trust, or other planned giving mechanism, you make a meaningful contribution to the preservation of Louisville's natural heritage while also enjoying potential tax benefits and financial flexibility. Your gift also makes you a member of our **1891 Society**, aligning you with other visionaries like Olmsted himself, who understood the enduring value of investing in the future.

By following Olmsted's example and sacrificing immediate gains for the sake of the future, you too can create a legacy that enriches lives and strengthens our community for years to come.

If you have already made a planned gift, thank you! Please let us know so we can celebrate you and your investment in the future.



Members of the 1891 Society have the opportunity to connect with fellow forward-thinking individuals at annual events. Past gatherings have been held at Iroquois Park (top) and Beargrass Preserve (above).

For information about planned giving, contact Danielle Archer, Senior Director of Marketing and Development, at (502) 456-3260 or danielle.archer@olmstedparks.org.



After the Storm

50 years after the devastating 1974 tornado, restoration work continues in Cherokee Park.

Matt Spalding
Director of Stewardship

The Daniel Boone statue at Cherokee Park stands surrounded by wreckage after the 1974 tornado. Photo credit: Bill Luster for the Courier-Journal.

IN 1891, WHEN FREDERICK LAW OLMSTED set eyes on what would become Cherokee Park, it was not a blank slate. The farmland included open pastures with majestic shade trees, densely forested creek bluffs and bottomland. To this pastoral topography, Olmsted added many specimen trees in the open landscape and even more species in the woodlands. In time, Cherokee Park grew into Olmsted's vision, with grand groves, tree-lined roads and clusters of flowering shrubs.

Then, on April 3, 1974, the tornado struck. In addition to the lives lost and property damaged in the storm, thousands of mature trees were destroyed in minutes. Cherokee Park lost 80% of its tree canopy. At the time, it was said no one alive in 1974 would ever live to see Cherokee Park restored to its former glory. Fifty years later, it's still a work in progress.

In the aftermath of the tornado, Louisville Parks and Recreation closed Cherokee Park for a month to clear downed trees from roadways. Soon, park officials and concerned citizens looked to historic documents and maps to begin forming plans to replant the park. These plans were the impetus for the formation of the Friends of the Olmsted Parks, which was formalized as Olmsted Parks Conservancy in 1989.

However, execution of these early restoration plans had unforeseen consequences. When native trees weren't readily available, exotic species were planted instead—for example, European beech was substituted for American beech and London Plane for sycamore. The new trees were not always installed properly and were seldom irrigated or pruned. In addition, many slopes that had been shady before the tornado were now sunny,

allowing vines and brambles to smother many of the newly planted trees.

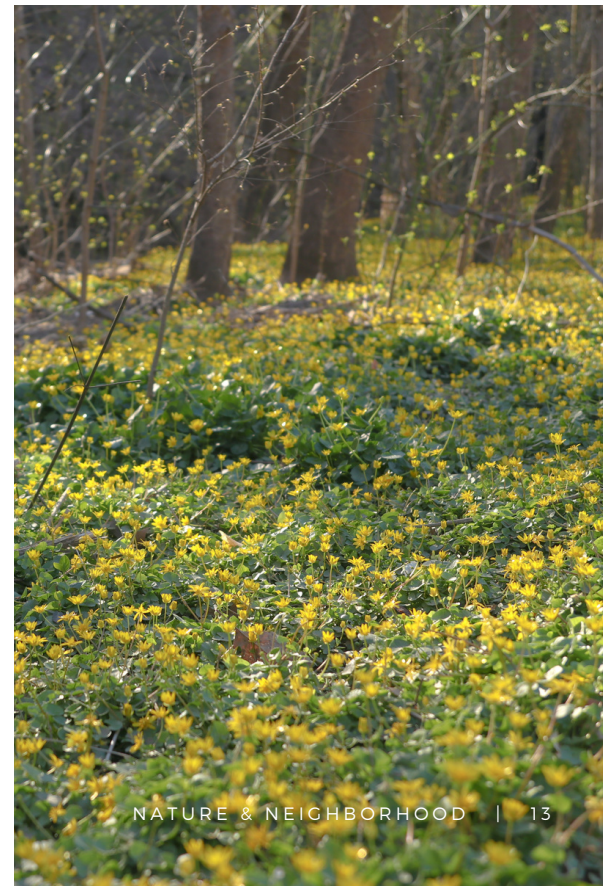
The situation was made worse by the presence of invasive plants. In the 1960s, when Interstate 64 was built through Cherokee Park, bush honeysuckle had been planted along the corridor for erosion control, noise screening and a visual buffer. Olmsted himself had even called for certain invasives in his planting plans at the turn of the century, not knowing how these exotic plants would later start to behave. When the 1974 tornado destroyed the park's tree canopy and exposed new areas to sunlight, these opportunistic invasives were set to dominate—and for the next 30 years, they did just that.

In 2006, Olmsted Parks Conservancy launched a Woodlands Campaign to fund a crew to remove invasive species from Cherokee and Seneca Parks, marking the formation of the Team for Healthy Parks.

Today, Cherokee Park users can revel in the fruits of years of labor. Biodiversity has returned to many parts of the park, and native plants that survived in the seedbank have reemerged, including several spring ephemerals and the celebrated crested coralroot orchid.

However, ecological restoration work is ongoing. Natural areas are still threatened by invasive plants like wintercreeper and Japanese chaff flower. Seeds spread from neighbors' backyards and on the shoes of park users who cut through the woods. Erosion and flooding make matters worse. Woodlands also face threats from exotic insects like the emerald ash borer and the incoming spotted lanternfly, as well as pathogens like Dutch elm disease. We must remain vigilant to these and other dangers to our parks, even as we celebrate the last fifty years of progress.

Below: Cherokee Park has recovered significantly in the 50 years since the tornado, as evidenced by this photo of the Daniel Boone statue in January 2024 (left). However, the presence of invasive plants like fig buttercup (right) means there is more work to be done.



Luna Moth

Actias luna



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Olmsted Parks Conservancy's mission is to restore, enhance and forever protect Louisville's Olmsted-designed parks and parkways, connecting nature and neighborhood while strengthening the community's well-being.

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