OLMSTED PARKS CONSERVANCY

NATURE & NEIGHBORHOOD

Spring 2023

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OLMSTED PARKS CONSERVANCY

IN THIS ISSUE

04 Birding in the Olmsted Parks

06 Springtime at Stegner Grove

08 Spring Treatment Spotlight: Fig Buttercup

10 5 Questions with Maizie Clarke

11 Gardening with Native Plants

14 Ladybird Johnson: KYTC's Park

16 GUEST PIECE: How Wetlands Can Fight Climate Change

Cover: OPC staff in Central Park. Left to right: Liz Winlock, Nik Eiche, Lauren Hendrickson, Mary Anne Fox, and Matthew London. Photo by Jesse Hendrix-Inman.

Above: Detail of the scarf designed for OPC by local artist Maizie Clarke.

BIRDING IN THE OLMSTED PARKS

Major Waltman
Project Director

Sandhill cranes soar above Cherokee Park. Photo by Jeff Mattingly.

IT'S FEBRUARY 18, 48°F and sunny. I'm out walking my dogs late in the morning and am suddenly stopped in my tracks by the calling of sandhill cranes somewhere overhead. After scanning the sky for a few moments, I finally hone in on a group of about 45 cranes slowly circling high above, gaining altitude to continue their migration north. After four or five big loops, one crane takes the lead and the others fall into their characteristic V-formation. A strong upper-level southerly breeze, perfect for migration, quickly carries the flock out of sight. With a good tail wind like today, the flock could cover as much as 500 miles in a day.

The northward movement of sandhill cranes in mid-February is a harbinger of spring and signals the return of other birds that have skipped town for the winter. Late March is about the time we may begin to hear and see some of these first returning species. The songs of the Louisiana and northern thrushes are always two of the first warbler species to

be heard, announcing their return from faraway wintering grounds. Others, such as the yellow-throated warbler and northern parula, can also be heard in late March.

As spring progresses into April and then May, various bird species begin to appear and fill the air with their beautiful songs and colors, with the wood warblers being the most abundant. Of the 38 species of warblers most commonly seen in the Eastern United States, 36 have been spotted in our Olmsted Parks.

Unfortunately for birders, most of the warbler species like to hang out in the tops of the biggest trees, foraging on a variety of caterpillars. Locating and identifying the birds can be a challenge, making binoculars a must. However, the warblers generally have unique songs, and listening for these songs can make it easier to track down and identify the birds. The woodlands of Cherokee, Iroquois, and Shawnee Parks are good places to search for warblers. Often, walking along the edges of woodlands, an observant birder can be awarded with finding 15 to 20 different species of warblers in a single outing.

Warblers are not the only migrants returning to our local woodlands and open areas in the spring. An eye on the sky on a breezy, sunny day may reveal lots of migrating birds of prey, some just passing through, but some settling down in our area for nesting. Another large group of returning birds are the flycatchers. The sound of the Acadian flycatcher in our woodlands is a true indication that summer is upon us.

If you want to see a particular bird, it helps to know the habitat that species prefers and to become familiar with their specific song. Persistence and patience are necessary for a successful bird outing.

I personally use birding as an excuse to get out into nature, either with other birders or (more often) by myself. The very nature of birding forces us to slow down and tune into every little sound and movement around us. I have been birding for over 45 years, and I never tire of picking up the binoculars and spending some alone time in the woods or open grasslands, listening and searching for birds.

Yellow-throated warbler. Photo by Andrew Weitzel (CC BY-SA 2.0).

Springtime at STEGNER GROVE

Mary Anne Fox
Field Crew Technician

LAST YEAR, THE TEAM FOR HEALTHY Parks saw potential in a semi-overgrown collection of trees located just past Hogan's Fountain and the restrooms in Cherokee Park. The site included walnut, poplar, oak and beech trees, and we envisioned extending the grove with additional native tree species. Now that the new plantings have had a chance to weather a few seasons, the site is a beautiful place to visit. It is named in honor of Douglas D. Stegner, one of the founders of Olmsted Parks Conservancy, and his family.

If flowers pique your interest, springtime promises a show in Stegner Grove. Each year as the trees become more established, fuller blooms of white and pink begin showing off in early spring. Heirloom pears (*Pyris communis*) are usually the first to flower, followed closely by delicate blossoms of

Top: Stegner Grove in March of 2023. Photo by Jesse Hendrix-Inman.
Below: March 2022, shortly after the grove was planted. Photo by Lauren Hendrickson.

serviceberry (*Amelanchier grandiflora*), purple-pink spots of redbud (*Cercis canadensis*), and the beloved pink and white clouds of dogwood (*Cornus florida*). If you are fortunate, you may even catch a whiff of the fragrant persimmon flower (*Diospyros virginiana*).

For me, spring flowers are a great relief, signaling the end of bitter cold and celebrating longer, sunnier days to come. They also signal "buffet" to the insects and other pollinators who are waking up in search of food and safe spaces for mating. This is good news for fruit lovers because more pollination means a larger fall harvest.

As spring warms, the serviceberries will be the first to give way to blueberry-like fruit beloved by birds and delicious by the handful. Watch for the graceful white panicle blooms on the yellowwood (*Cledastrus kentuckea*) and the fragrant yellowish-white pagoda dogwood blossoms (*Cornus alternifolia*) while the rest of the grove shifts to luscious and varied textures of foliage, soaking in the sun and producing energy for their root and fruit production.

Over the years, Stegner Grove and the Bonnycastle Hill area have undergone a stunning transformation, which continues to this day with the renovation of Hogan's Fountain. The Team for Healthy Parks is often busy working in the surrounding natural areas, protecting the health of woodlands and prairies. With the many improvements and ongoing maintenance in the area, it's no wonder Stegner Grove is a popular destination for park users. This spring, take some time to visit Stegner Grove and see the natural beauty for yourself.

Meet the Team

Freddie

On Staff Since: April 2022

Found as a stray in the parking lot near the Olmsted Parks Conservancy office, this friendly feline quickly endeared herself to the staff with her love of cuddles and distinctive, raspy meow. She now lives full-time at the office, where she can often be found lounging on desks or asleep in her favorite chair. Her preferred toys include twist ties and plastic rings. She enjoys gazing out windows, napping (especially on laps), and keeping watch over her territory from the spiral staircase that leads to the attic.

While she doesn't know much about park restoration, Freddie is an important member of the team for the *paw*-sitive energy she brings. We're glad to have her on board – even if she does shed!

SPRING TREATMENT SPOTLIGHT

Fig Buttercup

Lauren Hendrickson
Field Crew Technician

A carpet of fig buttercup in Cherokee Park. Photo: Jesse Hendrix-Inman.

WHAT'S YOUR FAVORITE spring wildflower? Some of mine are Virginia bluebells and dwarf larkspur, which appear in Cherokee and Chickasaw Parks. These *spring ephemerals* bloom and complete their life cycle during just a few weeks in late winter and early spring, a growth strategy which allows them to capture plentiful sunlight before the trees leaf out. But invasive plants, like fig buttercup, pose a challenge to these native flowers. These plants spread rapidly during the weeks when ephemerals emerge, and they stay up longer than many native species, crowding them out.

Fig buttercup (*Ficaria verna*), also known as lesser celandine, is a spring perennial that creates a mat of dark green, heart-shaped leaves in late winter from prolific tubers found in the soil below. The flower blooms glossy, bright yellow in weeks to come, often taking up a lot of space on the woodland floor before native seedlings emerge. It can be identified by its numerous stamens, a characteristic of the buttercup family. While these flowers are a common spring sight along Beargrass Creek in Cherokee and Seneca Parks, it is important to know fig buttercup is an invasive plant that threatens the health of our limited natural areas by displacing native plant populations that are of greater value to wildlife.

This herbaceous invader has many modes of dispersal such as human activity, abundant

deer and increasing flood events. It can spread so profusely because multiple parts of the plant can propagate, like the tubers and bulbils found along the leaf axis. To keep *Ficaria* from gaining a foothold in new areas, the most effective treatment is a systemic herbicide that moves through the plant's leaves, where the chemical is applied, to the tubers and bulbils where it will reproduce.

In early spring, the Team for Healthy Parks can be seen working to combat this problem in various parks including Cherokee, Iroquois and Shawnee. This time of year, when *Ficaria* has emerged before much else, creates an ideal treatment window for the Team. While other plants are still over-wintering, non-target damage to surrounding species is minimal. As extensive mats of this groundcover have established in low flood plain areas, the Team focuses their treatment efforts on keeping the plant from encroaching further into sensitive plant communities.

During my years treating *Ficaria* on the Team, I have enjoyed revisiting an area we've previously treated to see the plant communities of wild hyacinth (*Camassia scilloides*) come up later in the year. Restoration monitoring is part of the work we do, and it is encouraging to see the hyacinth filling in as we continue to monitor the area. This progress can be viewed from the trail on the southern side of Cochran Hill in Cherokee Park, where the wood-land swath of hyacinth leaves sends up green, braid-like inflorescences in April, then flowers a light blue around Derby. Many other spring ephemerals can also be seen along this trail.

To help keep fig buttercup and other invasive plants at bay, stay on trails and paths when recreating to slow the spread. Before moving between different areas of the park, check your shoes (and the paws or hooves of animal companions) to ensure no plants are hitching a ride.

Dwarf larkspur in Chickasaw Park. The removal of invasive plants allows this native species to thrive. Photo by Lauren Hendrickson.

5 Questions with **Maizie Clarke**

IN 2022, LOCAL ARTIST MAIZIE CLARKE created a custom watercolor painting that is featured on Olmsted Parks Conservancy's exclusive silk scarf. The design celebrates the flora, fauna and architecture of our Olmsted Park System in vibrant color. Here's what Ms. Clarke had to say about her work, the scarf, and our local Olmsted Parks.

Tell us about your artistic medium and process.
I am a watercolor illustrator. I love working with clients to create charming and meaningful artwork.

Can you describe how you created the custom design for Olmsted Parks Conservancy?
My goal with this project was to create charming artwork that highlights all of the different reasons that the community values the parks: the natural beauty that is native to Kentucky, the spaces that the parks provide the community to gather, and the breathing space that nature provides.

What did you learn about the Olmsted Parks as a result of this project?
I loved learning about all of the diverse native plants and animals that call the Olmsted Parks home.

Maizie Clarke. Photo by Jama Finney.

What's your favorite way to wear the scarf?
I love wearing it folded in half diagonally so that the different vignettes are featured.

Do you have a favorite park (or two, or more?)
My husband and I love walking our dog in Seneca and Cherokee. Central Park is a must-see, especially for Shakespeare in the Park!

Need a Mothers Day gift? The scarf Ms. Clarke designed is available for purchase at **olmstedparks.org/shop**.

GARDENING WITH NATIVE PLANTS

Matthew London
Field Crew Technician

A variety of native wildflowers in Cherokee Park. Photo by Jesse Hendrix-Inman.

NATIVE, EXOTIC, NOXIOUS, AND invasive plants. What does this mean and why should you care? These terms describe different categories of plant species and indicate where they originate and how they behave. There may be overlap between some of these descriptors, but key differences lie in their impact on other species. Choosing plants to install in your garden can have a big impact on local wildlife, and being informed is a great way to make the best decisions.

Native plants occur naturally in a particular geographic area and have evolved over time to be well-adapted to the local climate, soil, and other environmental conditions. These plants provide important ecosystem services such as habitat, food, and pollination for other species. The list is numerous, with an estimated 2,900 individual plant species present in our state.

Exotic plants have been introduced to a new geographic area from another part of the world. Not all of these plants are invasive, but some capitalize on local conditions more than others. They can be beneficial if they provide ecosystem services such as food, medicine, or ornamental value, but those that are invasive can be detrimental to our native landscapes.

I would never try to convince someone to rip out their Elephant Ears (*Collocasia escuelenta*) or chop down their hardy bananas (*Musa basjoo*). These interesting and ornamental landscape additions are some of the first that piqued my interest in the botanical world. However, these do not tend to "escape" or outcompete other beneficial plants. This is the case for many ornamentals. Exotic plants can also be described as "non-invasive" or "naturalized" depending on their interactions within the environment.

Photo: Theodore Webster (CC BY 3.0).

Photo: Donald Hobern (CC BY 2.0).

Bur cucumber (left), a native plant, exhibits the same aggressive behavior as invasive porcelain berry (right).

Noxious plants have been designated by a government agency as harmful to the environment, economy, humans, and livestock. They can be native or non-native, but they are typically invasive in habit. Many of these plants are restricted for sale or inclusion in seed mixes due to these harmful tendencies.

For example, the US Department of Agriculture (USDA) lists bur cucumber (*Sicyos angulatus*) as a noxious weed in Kentucky. Last fall, while managing porcelain berry (*Ampelopsis brevipedunculata*) in Cherokee Park, the Team for Healthy Parks came across a large mass of bur cucumber growing on top of the woodland edge, crowding out the edge-prairie below. Like many of its relatives in the gourd family, this vine supports large leaves, climbing over all other plants and making the most of the sunlight. In turn, it reduces the available light to other plants, and may reduce the productivity of the diverse woodland edge. This (native and aggressive) plant exhibited the same habit as the (invasive and non-native) porcelain berry, and the Team were able to manage them both in a similar fashion.

Invasive plants have the ability to spread rapidly and outcompete other plants in their non-native environment. They may cause significant harm by disrupting natural ecosystems, decreasing biodiversity, altering soil composition, or increasing the risk of wildfires. They may also prop up other exotic pests that are detrimental to our local flora. For example, tree-of-heaven (*Ailanthus altissima*), an invasive plant, is one of the preferred hosts of spotted lanternfly, an invasive insect. This tree produces prolific amounts of seed, grows rapidly and crowds out its native tree neighbors. Its leaf debris may also leach allelopathic chemicals (chemical inhibitors of germination or plant growth) into the surrounding soil.

Many invasive plants have no local pests or prevalent diseases because they have not evolved alongside their fungal or animal counterparts in the new area, allowing them to subvert important "checks and balances" in their new location. Invasive plants are often difficult to control, and the Team for Healthy Parks expends numerous resources to keep the worst offenders in check.

You can help ensure our natural areas stay free of pest plants by refraining from planting them, replacing them with native alternatives, or volunteering with Olmsted Parks Conservancy to help reduce their presence in our parks. With a new understanding of how native, exotic, noxious, and invasive plants play a role in our environment, be sure to check for the qualities and habits as you make plant selections for your own yard or garden. Happy planting!

Invasive Plant Alternatives

Instead of planting...	Consider planting...
✗ Shrub Honeysuckles (*Lonicera maackii*)	✓ Winterberry Holly (*Ilex verticillata*) Spicebush (*Lindera benzoin*) American Cranberry Viburnum (*Viburnum trilobum*)
✗ Japanese Bareberry (*Berberis thunbergii*)	✓ Virginia Sweetspire (*Itea virginica*) Arrowwood (*Viburnum dentatum*) Black Chokeberry (*Aronia melanocarpa*)
✗ Chocolate Vine or Five-Leaf Akebia (*Akebia quinata*)	✓ Trumpet Honeysuckle (*Lonicera sempervirens*) Virginia Creeper (*Parthenocissus quinquefolia*) Crossvine (*Bignonia capreolata*)
✗ Lesser Celandine (*Ficaria verna*)	✓ Lobed Tickseed (*Coreopsis auricularis*) Celandine Poppy (*Stylophorum diphyllum*) Green & Gold (*Chrysogonum virginianum*)
✗ Privet (*Ligustrum vulgare*)	✓ Red Chokeberry (*Aronia arbutifolia*) Ninebark (*Physocarpus opulifolius*) American Holly (*Ilex opaca*)
✗ Chinese Silver Grass (*Miscanthus sinensis*)	✓ Switchgrass (*Panicum virgatum*) Indian Grass (*Sorghastrum nutans*)
✗ Burning Bush (*Euonymus alatus*)	✓ Strawberry Bush (*Euonymus americanus*) Winterberry Holly (*Ilex verticillata*)
✗ Wintercreeper (*Euonymus fortunei*)	✓ Ginger (*Asarum canadense*) Allegheny Spurge (*Pachysandra procumbens*)

Ladybird Johnson
KYTC's Park

Wilson Ethington
Project Coordinator

Left: Ladybird Johnson land (circled), surrounded by Bowman Field, Seneca Park and golf course, I-64, and residential properties. Right: A section of Beargrass Creek at LBJ.

THERE IS A LITTLE GEM of woodlands next to Seneca Park that is widely considered to be parkland – but it's not. Spanning 18 acres, the site includes a winding stretch of Beargrass Creek and its floodplain, a shallow limestone hillside, and circuitous trails running throughout. Off the beaten path of the busy Seneca Park walking loop, this little tract offers a quiet space to hike and enjoy nature in the heart of St. Matthews. But in fact, this land – fondly referred to as Ladybird Johnson or "LBJ" by Conservancy staff – is owned by the Kentucky Transportation Cabinet (KYTC).

LBJ was purchased and razed as a staging site for the construction of Interstate 64 during the mid-1960s. After the construction of the interstate, the land was forgotten by KYTC and largely left to its own devices. Since then, the land has been used as a de facto addition to Seneca Park's natural areas. Because of its importance to park users, Olmsted Parks Conservancy has spent the last three years working to restore LBJ to a healthier state.

Woodland restoration

Top: The difference between a honeysuckle dominated woodland (left) and a recently restored woodland (right).

Left: The stump of a honeysuckle plant that was cut-stump treated. Right: Lily-leaved twayblade orchid.

and invasive plant management are major aspects of OPC's work. Some of the most noxious species we deal with include bush honeysuckle, tree of heaven, and red mulberry, which seed aggressively and create monocultures that affect everything from biodiversity to erosion control throughout natural areas. After completing initial clearing of these species in the woodlands of the Olmsted Parks, we were able to focus our efforts on revitalizing LBJ.

In 2020, dedicated volunteers spent almost 2,000 hours cutting honeysuckle in LBJ. The Team for Healthy Parks followed, treating the honeysuckle stumps with herbicide so they could not resprout. Finally, with the rental of a forestry mulcher in the summer of 2022, OPC completed the work to initially clear the site of the worst of the invasive species.

After this ecological restoration work completely transformed the woodlands, OPC has continued to rehabilitate LBJ by investing $80,000 into a sustainable, mixed-use trail system. The freshly completed trails offer incredible mountain biking amenities and will help the area fully recover from the abuse and erosion it has endured since the highway department first clear cut the land 60 years ago.

Now that you know about the history and effort that has gone into LBJ, be sure to go see it! The fruits of the restoration work are already starting to appear. Several native species emerged in the area last growing season, including the lily-leaved twayblade orchid and countless others. All are abundant and available to enjoy whether you're on two feet or two wheels. Have fun!

HOW WETLANDS CAN FIGHT CLIMATE CHANGE

Andrew Mehring, Guest Writer
Assistant Professor of Ecosystem Ecology
University of Louisville

Above: Researchers Mark Tierney and John Swartz measure greenhouse gas emissions in Willow Pond at Cherokee Park.

Dr. Andrew Mehring

I'm an ecosystem ecologist and assistant professor in the University of Louisville's Department of Biology. I study the flow of matter and energy through ecosystems. Currently, I am collaborating with Olmsted Parks Conservancy, other parks in Jefferson County, and professors and students from the University of Louisville in a research project to measure greenhouse gas emissions and uptake in small ponds and wetlands.

Healthy wetlands can sequester and store large amounts of atmospheric greenhouse gases, primarily because photosynthesis by aquatic plants removes carbon dioxide (CO_2) and converts it into sugar, which is then used to create new plant cells. When those aquatic plants die and decompose, some CO_2 is returned to the atmosphere. However, because rates of plant growth are faster than the rates at which they decompose, some of the carbon that they accumulated during their life is buried in sediments and locked away from the atmosphere. For this reason, the restoration and preservation of ponds and wetlands can be an important nature-based solution to help mitigate the emissions of greenhouse gases from the burning of fossil fuels.

However, when ponds and wetlands are impacted by fertilizer runoff, they can get overrun by harmful algal blooms and floating plants (e.g., duckweed). Wetlands in this state tend to emit large amounts of methane (CH_4), a potent greenhouse gas. As a result, ponds receiving lots of fertilizers may not provide as many useful services and are less likely to function as storage vaults for atmospheric carbon.

One goal of our project is to test the ability to use satellites to rapidly assess the health of small ponds in Jefferson County, including ponds in Cherokee, Chickasaw, and Iroquois Parks. Because algae and floating plants may be indicators of fertilizer runoff and enhanced emissions of greenhouse gases, we measure algal blooms (chlorophyll concentrations) and floating plants in as many ponds as possible in a single day, on days when specific satellites are passing overhead. Our direct measurements of algae and aquatic plants are then compared with the "greenness" and other wavelengths of light that are detected by passing satellites, as well as the emissions or absorption of greenhouse gases that we measure directly.

The final component of this project addresses citizen science and outreach. Later in April, we'll install signs with a QR code in several parks around Louisville. The QR code will link to a survey that assesses public perceptions of wetland ecosystem services and disservices and tests people's ability to recognize the indicators of healthy wetlands.

Through this project, we hope to provide new tools in the rapid assessment of wetland health, to better understand how wetlands and small ponds might impact Earth's climate, and to work with Jefferson County residents to improve our understanding of wetland management and the valuable services that wetlands provide.

Louisville's Olmsted Parks provide many benefits, including opportunities for recreation, habitat for wildlife, and (potentially) the storage of large amounts of atmospheric carbon in forests and wetlands. A better appreciation of those services could help to guide land preservation and the maintenance of our parks moving forward, not to mention providing important information for landowners, scientists, and government officials who are assessing the ability of Jefferson County's natural ecosystems to "soak up" greenhouse gases in the face of climate change.

There are many steps we can take to protect wetlands, including disconnecting downspouts, limiting water use during rainstorms, avoiding fertilizers in our yards, and picking up pet waste. We can also install vegetated buffers around ponds, preferably buffers that are not mowed grass. A buffer of plants and trees helps to stabilize banks and absorb any fertilizers that might otherwise run off into the water. Overhanging trees also provide shade that helps to keep water cooler during hot summer days.

Collaborators in this research include UofL professor Dr. Andrea Gaughan, Biology PhD candidate Mark Tierney, graduate student David Brown, and undergraduate students Madison Cicha and Kassidy Haynes. To learn more, visit the project's StoryMap.

OLMSTED PARKS CONSERVANCY

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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