



The Arboretum

State Botanical Garden of Kentucky

UNIVERSITY OF KENTUCKY AND LEXINGTON-FAYETTE URBAN COUNTY GOVERNMENT

Quarterly Newsletter | July through September 2023

The Arboretum's mission is to serve as a resource for environmental and horticultural education, research and conservation.

Hello, friends, colleagues, neighbors and stakeholders!

I'm pleased to report that we have over 2,000 subscribers to our Quarterly Newsletter—and we would love to reach many more people who might be interested in knowing all that The Arboretum, State Botanical Garden of Kentucky, and its staff offer to the University of Kentucky community, those who live in Lexington or nearby, to citizens across the Commonwealth, and beyond.

Our talented staff maintain and continuously develop our 100 acres of gardens, curated collections and landscapes; offer nature-inspired and focused educational programming in the award-winning Kentucky Children's Garden; and welcome visitors from across the US and beyond to the Dorothea Smith Oatts Visitor Center.

I hope you will join the many Arboretum Friends who support all that is offered and provided in our unique public garden, either by making a financial gift of support or investigating our varied volunteer opportunities. There is something here for everyone, and we can't wait to assist you.

If you have a friend who might like to subscribe to this newsletter, please let them know they can send an email to Arboretum@uky.edu with their name and email address and we'd be happy to add them.

My warm regards to all,

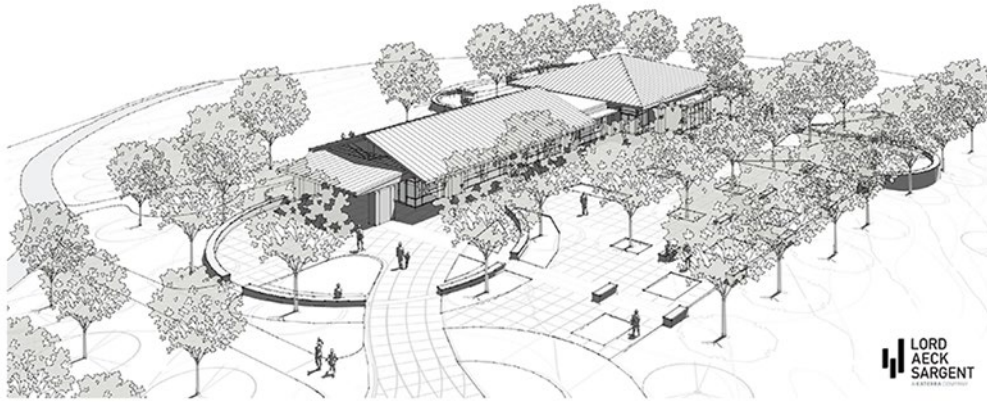
Molly Davis

Arboretum director

Dorotha Smith Oatts Visitor Center Expansion & Renovation Fundraising Progress

We are pleased to announce an important update related to the Dorotha Smith Oatts Visitor Center at The Arboretum. Over the past few months, momentum has been building related to our philanthropic efforts to renovate and expand the Visitor Center. The timing is important, given the increase in the number of visitors and programs offered annually and the need for additional space. The firm of Lord Aeck Sargent (LAS) developed schematic plans to help support our growing demand and needs. The renderings shown here of the Visitor Center project were provided by LAS.

Dorotha Smith Oatts Visitor Center Renovation and Expansion



Aerial view (from existing parking lot) of the expanded Visitor Center and outdoor gathering areas.

As of June 27, we have received over 660 gifts from different donors to the campaign, totaling **\$2,790,591**. With the renewed momentum, we have received gifts from **57 new donors** in the past six months alone! The total thus far received includes \$500,000 contributed by the Lexington-Fayette Urban County Government (LFUCG) which moves us even closer to the goal.

In all, the fundraising goal is \$3.5 million and we only need **\$709,409** more! We appreciate each person who has donated and we welcome additional donations to help us reach our goal.

You can support the effort by making a gift online at

<https://uky.networkforgood.com/causes/5050-arboretum-center-fund>

May 9 Celebration Event for the Dorotha Smith Oatts Visitor Center Renovation & Expansion Project

Attendees and participants at the May 9 Arboretum celebration event enjoyed learning about the latest fundraising momentum and excitement surrounding the efforts of so many who are involved to reach our goal.

May 9 Celebration Event for the Dorotha Smith Oatts Visitor Center Renovation & Expansion Project



(Left to right) Nancy Cox, Dean, UK College of Agriculture, Food and Environment and Vice President, Land-grant Engagement, Mrs. Joy Long, Ms. Traci Steele, and Dr. Mary Witt at the event.



Mr. Bill and Mrs. Vange Lear spoke of their support of The Arboretum and efforts to assist in the important task of fundraising for the Visitor Center project.



Mr. Jackson and Mrs. Teresa Kennedy McReynolds at the event. Their generous support ensures as many children as possible are able to visit and learn in the Kentucky Children's Garden.

May 9 Celebration Event for the Dorotha Smith Oatts Visitor Center Renovation & Expansion Project



Mr. Don Witt, Assistant Vice President, UK Philanthropy, shares an Arboretum story, much to the delight of David Timoney and Susan Lamb (seated behind him).



Mr. David Timoney, Senior Institutional Officer, UK Philanthropy, has worked with Mr. Witt since February on Visitor Center fundraising with phenomenal results.



CAFE Dean Emeritus Scott Smith and Arboretum Native Plants Collection Curator Jess Slade. Dean Emeritus Smith has graciously agreed to assist with Visitor Center fundraising activities in 2023.



Stalwart Arboretum supporters volunteers Joe Dietz and Zii Caluag. Zinnah is serving a s term as The Arboretum Fri representative on the Adv B.

*Eastern Kentucky Forest Canopy in Autumn
Stained Glass Window for the
Dorothea Smith Oatts Visitor Center Renovation*



Kentucky's Natural Treasures: a Living Tapestry of Biodiversity

A unique aspect of the Dorothea Smith Oatts Visitor Center renovation and expansion project is the inclusion of a suite of four stained glass windows made possible by a generous Arboretum donor. The four windows will represent the biodiversity found in four physiographic regions of Kentucky: the Eastern Kentucky forest canopy (depicted in autumn), the Bluegrass Palisades (depicted in spring), a Pennyrile remnant prairie (depicted in summer), and a Western Kentucky cypress swamp (depicted in summer). Collectively, they will show a "living tapestry of biodiversity," says glass artist and designer Laura Mentor.

Ms. Mentor conducted extensive research with field scientists and naturalists across Kentucky in order to design the windows and fully understand the plants, trees, animals, and insects that exist in natural relationship to each other. Each window will be approximately 3 feet wide by 7.5 feet tall, and comprised of three sections. Side panels (in black and white) illustrate the larger landscape where these species are found. The image at left depicts the first window to be completed, the Eastern Kentucky forest canopy in autumn, with details of the window in the image below. As you

can see, the window is highly detailed and glowing with color.

The suite of windows will offer not only an opportunity to educate and connect visitors to the Walk Across Kentucky (WAKY) Native Plant Collection at The Arboretum, but to the natural areas across the state they can visit to experience this wonderful diversity. Programming focused around the suite of windows will also play an important role in the completed project.

Details of Eastern Kentucky Forest Canopy Stained Glass Window for Dorothea Smith Oatts Visitor Center Renovation Project



Above, left to right: early sketches and research; the resulting barred owl, white oak and tulip tree leaves, and owl, yellow-shafted flicker, and red-tailed hawk feathers; whip-poor-will feather, opossum tracks, and female Blackburnian warbler; a red bat; and a pileated woodpecker in beech and scarlet oak leaves.

Other examples of the artist's work may be viewed at www.lauramentor.com

All images copyrighted by Laura Mentor, 2023.

Volunteer Spotlight

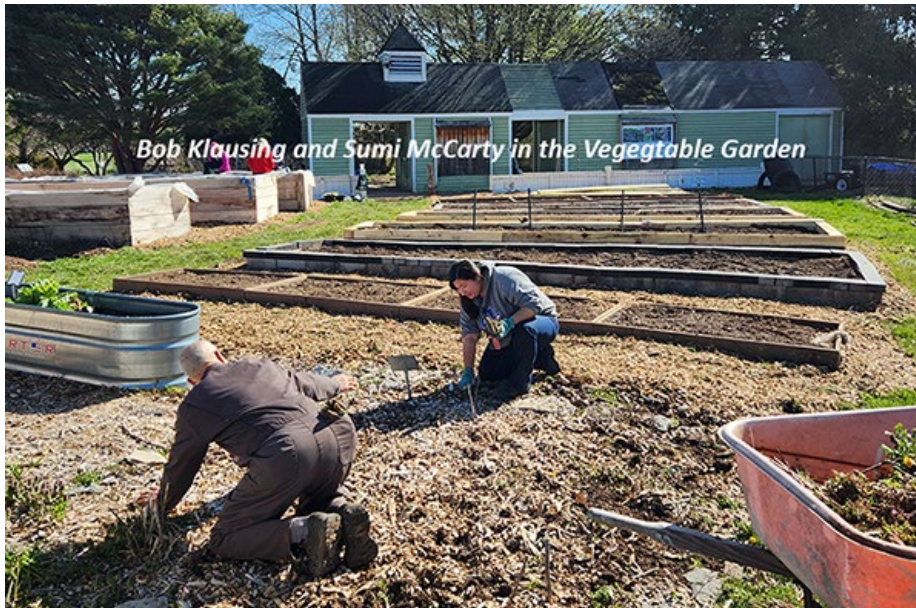
It's a Wednesday morning and Susan and Daryl Keltz are standing beside a tall raised bed, harvesting a lush crop of red-spotted lettuce. Each plant is pulled up whole before a bucket of water is used to wash dirt from the roots. The lettuce will soon be on the plate of a person experiencing food insecurity who might not otherwise have access to fresh greens. That's because the lettuce was grown in The Arboretum vegetable garden, then turned over to Glean Kentucky for distribution.



Most Wednesdays find Susan and Daryl in the garden. Both are retired—Susan from the Jockey Club and Daryl after a career in internet technology. They came to Lexington in the mid-80s when Daryl was hired to do IT work for the new Toyota plant in Scott County, which was under construction. He was employee No. 94.

Before the pandemic they volunteered in the Rose Garden for a couple of years. This is their first year working with vegetables, and they have already decided they want to do it again next year. “We felt like we could gather some knowledge from the whole thing, and also from the other (volunteers),” Daryl said. “And we love being outdoors.”

In another part of the vegetable garden that morning, Barbara Kemp, Bob Klausing, and Cindy Ryle were planting three varieties of zucchini. Two are varieties that have been grown here before. The third is new and being tested to see how it fares in Kentucky.



Barbara completed the Fayette County (Kentucky) Extension Master Gardener program in 2019. One of the reasons she is here is to satisfy the required volunteer hours she must put in each year. But there's more to it

than obligation. “This is the most beautiful place in Lexington,” she said. “I want to be here and watch the plants grow.”

Bob is a retired Lexington Parks and Recreation employee who helps with several Arboretum volunteer groups. He knows a lot about plants and his yard, which backs up to The Arboretum, is extensively landscaped. He says he used to grow a lot of vegetables, “but that now is slipping by the wayside. I grow a bunch of natives. I’m trying to get native wildflowers.” Today, he has brought a bucket full of Jack-in-the-pulpit plants to share with other volunteers.

Cindy was an interior designer and facility manager for an advertising company. She also had her own business for 13 years. “I love being out here,” she said. “I retired in December and I’m going to be outside for the rest of my life.”

Sumi McCarty, a UK Facilities Grounds worker who coordinates and manages The Arboretum’s vegetable garden, says this year she has had five to seven volunteers on most Wednesdays. That’s more than last year. The vegetables distributed through Glean Kentucky last year totaled 963 pounds—nearly half a ton! “We hope to double our production in 2023,” she said.

Editor’s note:

We extend our thanks once again to Arboretum Friend Andy Mead who provides the Volunteer Spotlight series featuring volunteers at The Arboretum. Thank you, Andy!

Exploring The Arboretum with Janet James Part 2: Native Shrubs

As described in the previous Arboretum Quarterly Newsletter, I had the privilege of photo-documenting the impressive native tree collection of 120 Kentucky species on The Arboretum grounds. Photos of the winter form, bark, terminal bud, flower, leaf, summer form, fruit, fall color, and leaf scar of each species were entered into the publicly accessible data base called Arboretum Explorer.

Because I learned so much from that experience, I decided to tackle The Arboretum’s sixty-two Kentucky native shrubs. To be honest, initially, shrub photography sounded dull after spending time with the majestic trees. However, the Native Plants Curator (at that time, Emily Ellingson), encouraged me as she handed over a printed list of the shrub species remarking that they are interesting and beautiful, too. After photographing them for over a year now, I agree!

At the outset, I wondered what exactly makes a plant a shrub, not a tree. An internet search revealed that shrubs are woody plants with multiple stems and shorter in height, usually less than 20 feet. As such, many in The Arboretum are understory plants which were challenging to photograph due to their positions in shade and the tendency to blend into the background with trees.

Winter Form and Bark

The winter form of shrubs certainly highlights their numerous stems and smaller size. I felt as though I photographed a lot of up-side-down brooms! The bark of most species, I noticed, is a dull gray or brownish color and flat with bumpy lenticels, as illustrated in the far left bark photo below. A few shrubs stand out though with thorny, colorful, or exfoliating bark shown in the other photos.

Winter Form (Native Shrubs)



Alnus serrulata
Hazel alder



Hamamelis virginiana
Witch hazel



Salix discolor
American pussywillow



Rhus copallinum
Winged sumac

Bark (Native Shrubs)



Ilex decidua
Swamp holly



Aralia spinosa
Devil's walking stick



Itea virginica
Virginia sweetspire



Physocarpus opulifolius
Ninebark



Euonymus americanus
Hearts a'busting

Terminal Buds

I discovered shrubs have the same distinctive terminal buds as trees which can be used for easy winter identification. Many are covered with insulating hairs like several of the ones pictured below. A few are so hairy that I burst out laughing when I first spotted them.

Rhus typhina, staghorn sumac, takes first place in that category with *Dirca palustris*, leatherwood, a close second.

Terminal Buds (Native Shrubs)



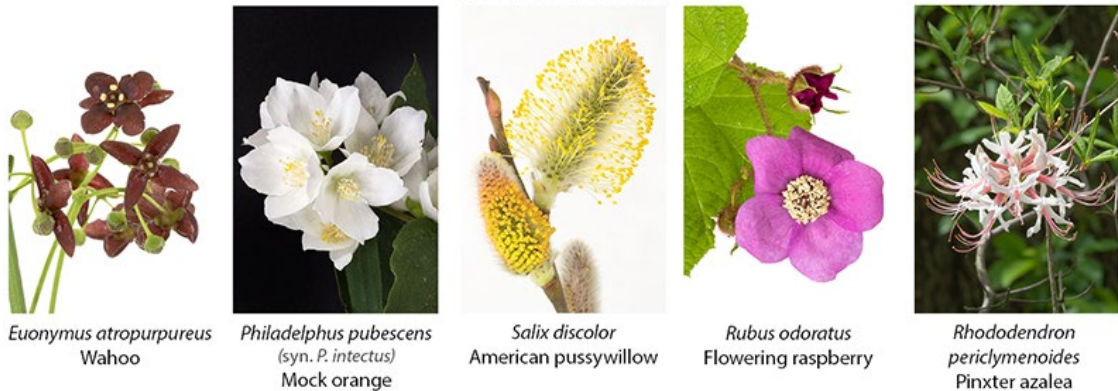
Flowers

Flowers of the shrubs appealed to me the most. I enjoyed observing flower buds develop over time and open into the attractive blossoms that entice their pollinators. It was worth the reconnaissance effort it took to catch them in perfect full bloom.

Flowers (Native Shrubs)



Flowers (Native Shrubs)



Leaves

The simple leaves or compound subleaflets of shrubs tend to be small and ovate which were rather monotonous to photograph. This is true of 53 of the 62 species. The ones below are some of the interesting exceptions.

Leaves (Native Shrubs)



Ribes cynosbati
Prickly gooseberry



Ptelea trifoliata
Wafer ash



Rhus copallinum
Winged sumac



Rubus odoratus
Flowering raspberry



Juniperus communis
Dwarf juniper

Summer Form

Summer is serious photosynthesis time for shrubs when their spindly multiple stems are obscured by the expanding appearance of mature foliage. Most of them in their summer form look like green mounds and are not differentiated much from each other in my photographs.

Summer Form (Native Shrubs)



Chionanthus virginicus
Fringe tree



Ilex verticillata
Winterberry



Swida drummondii
(syn. *Cornus drummondii*)
Roughleaf dogwood



Rhus typhina
Staghorn sumac



Fruit

Half of the shrub species in the Arboretum produce berries or berry-shaped fruit providing an important food source for birds and other animals. (I observed human visitors also sometimes find them irresistible.) It was a delight to photograph those and other colorful seed-bearing structures.

Fruit (Native Shrubs)



Euonymus americanus
Hearts a'busting



Corylus americana
American hazelnut



Symphoricarpos orbiculatus
Coralberry



Swida amomum
(syn. *Cornus amomum*)
Silky dogwood



Swida drummondii
(syn. *Cornus drummondii*)
Roughleaf dogwood

Fruit (Native Shrubs)



Ptelea trifoliata
Wafer ash



Aralia spinosa
Devil's walking stick



Staphylea trifolia
Bladdernut



Sambucus racemosa
Red elderberry



Rubus occidentalis
Black raspberry

Henry David Thoreau wrote, "The greater part of the phenomena of Nature . . . are concealed from us all our lives. There is just as much beauty visible to us in the landscape as we are prepared to appreciate, and not a grain more."

I took a deep dive into a little bit of the concealed phenomena of Nature by viewing the complex lives of The Arboretum's trees and shrubs and capturing that with my camera. Anyone can do the same when visiting by taking time to look closely at the plant collection or using Arboretum Explorer online at <https://uky.arboretumexplorer.org/> to view photographs.

Updates about the Walk Across Kentucky (WAKY) Native Plant Collection

Emerald Ash Borer (EAB)

Arboretum native plants staff recently completed treatment of many of our ash trees to protect them from the invasive insect Emerald Ash Borer (EAB). The process involves measuring the diameter of the trees at breast height (dbh), preparing injectors, drilling small holes near the base of the trunk, injecting and then waiting for the trees to take up the chemical. It's a lot like giving the trees a vaccine that will protect them for approximately two to three years! We rotate treatment of our trees on a 2-year cycle to prevent decline and eventual mortality by this invasive pest. This year, we treated 28 trees with the injection method and an additional 20 blue ash (*Fraxinus quadrangulata*) trees with a trunk spray. The photo below depicts WAKY 2022 intern Kayla Payne injecting an ash tree to protect it from EAB.



The bison are back!

Thanks to volunteers Janet James and Robin Maley, the roaming bison have returned to our Shawnee Hills prairie with a fresh coat of paint. Kentucky's prairies evolved with large ungulates like bison who kept trees from encroaching by grazing the foliage and created microhabitats for diverse plant species by trampling the soil beneath their feet.

Arboretum visitors can also roam through this meadow now on our newly mown path! The field is currently abloom with thousands of beardtongue and common milkweed plants, with more blooms to follow throughout the summer. The photo below depicts the refreshed and replaced prairie bison.



New Plantings



If you have visited The Arboretum recently, you may have noticed one of a number of garden expansions in progress within the native plant collection. These include two new prairie garden plantings in the Bluegrass and Pennyriple sections of The Arboretum. The photo at left shows the WAKY team planting and watering in a new prairie bed.

Some species we are particularly excited about include prairie dock (*Silphium terebinthinaceum*), white prairie clover (*Dalea candida*), white-leaf leather flower (*Clematis glaucophylla*) and four different species of blazing star (*Liatris* spp.). Although these plants are still young and small (we started most of them from wild-collected seed this spring) they should fill in over time to provide an abundance of blooms for pollinators as well as food and habitat for insects and wildlife.

Welcome summer native plant interns!

Thanks to funding from the UK Student Sustainability Council (SSC) and UK Physical Plant Division (PPD), we are excited to welcome two student interns - Callie Dickman and Faith Roberts - to our team this summer. Both Callie (below left) and Faith (below right) are students in the Natural Resources & Environmental Science (NRES) program at UK and are

interested in sustainability, urban forests, and resource management. If you see Callie or Faith out and about at The Arboretum, please feel free to say hello and welcome them!



Updates about the Kentucky Children's Garden (KCG)

The Kentucky Children's Garden has been abuzz with activity during the vibrant spring season, filled with blossoms, curious minds, and new additions.

Field Trips

Over the past few months, we were delighted to welcome four field trips from kindergarteners and first graders hailing from Fayette County schools. Their enthusiasm

and energy brought the garden to life, reminding us of the joy that nature can inspire in young hearts. Thank you to all the volunteers who helped make this happen.

Appreciation Days

We are continuing in 2023 the practice started in 2022 to have an “appreciation” Saturday as many months as possible. For the groups below, an adult and one child receive free admission to the Kentucky Children’s Garden on that day. Please remember you must present the relevant ID at the Visitor Center to obtain wristbands for free admission.

- **July 15, 9 AM to 4 PM** – First Responder and Healthcare Worker Appreciation Day
- **August 19, 9 AM to 4 PM** – Teacher and School Employee Appreciation Day

Aqueduct System

In our commitment to fostering a hands-on learning experience, we are thrilled to announce the newest addition to our garden—an aqueduct system! This interactive feature allows children to engineer, assemble, disassemble, and transport water throughout the garden, using the water pump as their source. It's a fantastic way for kids to explore the principles of fluid dynamics while having a blast.

We thank Eagle Scout candidate Andrew Sass for making this aqueduct as part of his Eagle Scout application. Andrew says, “I did this project to help teach kids about how water flows. I started planning and building after I met with Dawn [Bailey]. Even though it was her initial idea, I realized what a truly awesome project the aqueduct system really was the further I got into it.” We all agree that it is a great addition to the Kentucky Children’s Garden!

Aqueduct System added to Kentucky Children's Garden



Eagle Scout candidate Andrew Sass delivers his project, an aqueduct system, to the KCG, with the assistance of Children’s Education Coordinator Dawn Bailey.



Andrew Sass examines his finished project. So far, we’ve heard great reviews and are pleased to see the project’s appeal to a wide age range.

MacAdam Family Early Childhood and Education Literacy Grant



We are thrilled to share the news that the Kentucky Children's Garden has been honored with a grant from the prestigious MacAdam Early Childhood and Education Literacy Fund at Blue Grass Community Foundation. We extend a huge thank you to Phyllis MacAdam, a longtime supporter and Friend of The Arboretum (and former newsletter editor), for making this grant possible. With the generous support of this grant, we have expanded our collection of books, specifically focusing on diversity, and featuring multiple languages. These new additions will provide our young readers with valuable insights into different cultures, fostering inclusivity and a love for learning.

With the funds from this grant we have also acquired a collection of animal track replicas to educate children about the signs left behind by our furry friends. By learning to identify these tracks, our visitors can develop a deeper understanding and appreciation for the wildlife that calls our garden home. And that is not all—excitingly, we have acquired a delightful array of insects and millipedes (see photo at left taken by KCG intern Paris Juroff) for everyone to observe up close, encouraging hands-on exploration and scientific curiosity.

With the weather warming up and these fantastic additions in place, we anticipate a summer filled with boundless opportunities for both fun and education in the Kentucky Children's Garden. We invite you and your loved ones to visit!

Welcome to our summer KCG interns and our new Lead Educator!

Thanks to substantial funding from the UK Student Sustainability Council (SSC) and a variety of other UK sources, we are excited to welcome four student interns – Lily Cruse, Paris Juroff, Chloe Scoggins, and Tyler Wallenga - to our team this summer.

Kentucky Children's Garden (KCG) Summer Interns



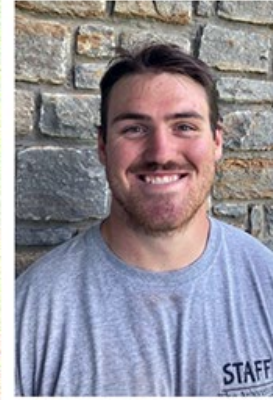
Lily Cruse holds a garter snake (*Thamnophis sirtalis*) near the pond in the Kentucky Children's Garden (KCG).



Paris Juroff with carpenter bee, honey bee, and bumblebees (*Xylocopa virginica*, *Apis mellifera*, and *Bombus pensylvanicus*, respectively) in the KCG.



Chloe Scoggins holds a baby goat (*Capra sp.*), part of the 2023 Addie's Day celebration in the KCG.



Tyler Wallenga's intern duties split between the Demonstration Vegetable Garden and the KCG.

Lily is a student in the UK Horticulture Department and we are grateful to Department Chair Dr. Mark Williams for his funding support. Chloe is a student in the UK Landscape Architecture Department and we are grateful to Dr. Chris Sass for his funding support. Paris is a member of the UK Horticulture Club and we are grateful to faculty club Advisor Dr. Rick Durham and staff club Advisor Ms. Shari Dutton for their financial support. Tyler is a Biology major who splits his internship hours between the Ornamental Horticulture Gardens (primarily in the Vegetable Garden) and the raised garden beds in the KCG. We thank the UK Physical Plant Division (PPD) for their funding support for Tyler.

**Hannah Wells is now Lead Educator
in the Kentucky Children's Garden**



Hannah Wells holds a bullfrog
(*Lithobates catesbeianus*, syn.
Rana catesbeiana) in the Kentucky
Children's Garden

We are pleased to announce that Hannah Wells, a May 2023 UK graduate who double-majored in Natural Resources & Environmental Science (NRES) and Environmental and Sustainability Studies (ENS), is now Lead Educator in the KCG. Hannah worked as an intern in 2022 and we are delighted welcome her back in her new post-graduation role.

If you see Hannah or any of our interns when you are in the KCG or at The Arboretum, please say hello and welcome them!

Upcoming Programs & Events

Save the Date for Moth Night—July 22, 2023!

Save the Date for Moth Night at The Arboretum!



Moth Night at The Arboretum — Saturday, July 22, from 9 to 11 PM

Attendees will enjoy a rare opportunity to see The Arboretum at night. We will have light-sheets set up to attract moths and a moth expert on hand to share information about what we see. Space is limited, so register early by sending an email to Arboretum@uky.edu to reserve your space. Please include your name, number of participants, and a phone number (in case we have to cancel the event).

Save the Date for Arbor Day—October 7, 2023!

Save the Date!!



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THE ARBORETUM
arborday
Saturday 7 October 2023

TREE CAMPUS
HIGHER EDUCATION
10 YEARS
Arbor Day Foundation Program

Information & Hours of Operation

The Arboretum grounds are open from dawn to dusk every day, except when there is a special event or a UK emergency.

Visitor parking is available dawn to dusk every day, except on days of UK Football home games when the parking lot is closed to visitors.

The Dorothea Smith Oatts Visitor Center is open Tuesday through Saturday from 9 AM to 4 PM.

The Kentucky Children's Garden hours of operation:

- June, July and August – Wednesday through Saturday - **9 AM to 4 PM**
- September and October – Wednesday through Saturday - **10 AM to 5 PM**

Restrooms are located near the entrance to the Kentucky Children's Garden. They are open from dawn to dusk every day, except on days of UK Football home games.

Helpful links to information on our website:

- **Home page** - <https://arboretum.ca.uky.edu/home>
- **Make a donation** - <https://arboretum.ca.uky.edu/donate>
- **General programming** - <https://arboretum.ca.uky.edu/calendar>
- **KY Children's Garden programming calendar** - <https://arboretum.ca.uky.edu/content/kcg-calendar>
- **Arboretum Explorer** - <https://uky.arboretumexplorer.org/asset.aspx>

UK Football season will soon be here!

- On days of UK Football home games, the grounds are open.
- On days of UK Football home games, the Kentucky Children's Garden, Visitor Center, and visitor parking are closed.

UK Football home game dates that impact operations (all are Saturdays):

September 2, 9, 16 and 30; and October 14 and 28

- If you are interested in obtaining a UK Football season parking pass for The Arboretum, contact <https://ukathletics.com/season-parking-permits/>
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***The Arboretum, State Botanical Garden of Kentucky, Quarterly Newsletter
July – September 2023***

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