



# *Nature Preserves and Programs*

*Connecting people to nature today to preserve nature for people tomorrow*

ANNUAL REPORT 2020-2021



Raleigh  
Parks





*Connecting people to nature  
today to preserve nature for  
people tomorrow.*

Nature Preserves program is part of the Natural Resources section, whose **mission** is to connect people and nature through experiences, education, and conservation.

**Our vision** is to create strong, healthy, sustainable communities and the environment.

## Program Director's Note

### Wow, it Has Been a Year!

Thank you for taking the time to read our 2020-21 Annual Report. We have had an exceptional year, despite facing the challenges brought by a Global Pandemic. Over the last year and a half, I think the one point that has been made abundantly clear is the importance of nature and the healing benefits spaces our Preserves and Parks have. The Nature Preserves and Programs team supported our community by working collaboratively to provide access to our nature trails, so quarantine-weary visitors had a refuge for fresh air, spaces to be active, and a place to reflect. We found ways to stay connected to the community and connect the community to nature. Visitation numbers soared, with several sites seeing double their average numbers as patrons sought adventure and solace on our wooded trails. We developed safe programming and met the needs of our community while advancing our mission to increase awareness and knowledge of the natural world through hands-on experiences. Our team also formed new partnerships and mentorship opportunities that helped us maintain, manage, and protect our diverse preserves and parks.

Our team continues to reflect on meaningful ways to increase inclusion, diversity, equity, and access into our preserves and workplaces and explore new ways to connect and represent our community. We strive to provide access and exceptional programs and services to ALL those who seek it.

We are very proud of our accomplishments this year, which we could not have done without the support of our volunteers, our partners, and most of all, our part-time staff.

***"He who lives with pines knows that a candle has a deeper meaning, for at its tips burns the eternal flame that lights a path into the future."***

***—Aldo Leopold, in 'A Sand County Almanac'***

**Kristi Moyer,  
Nature Preserves and Programs Director**

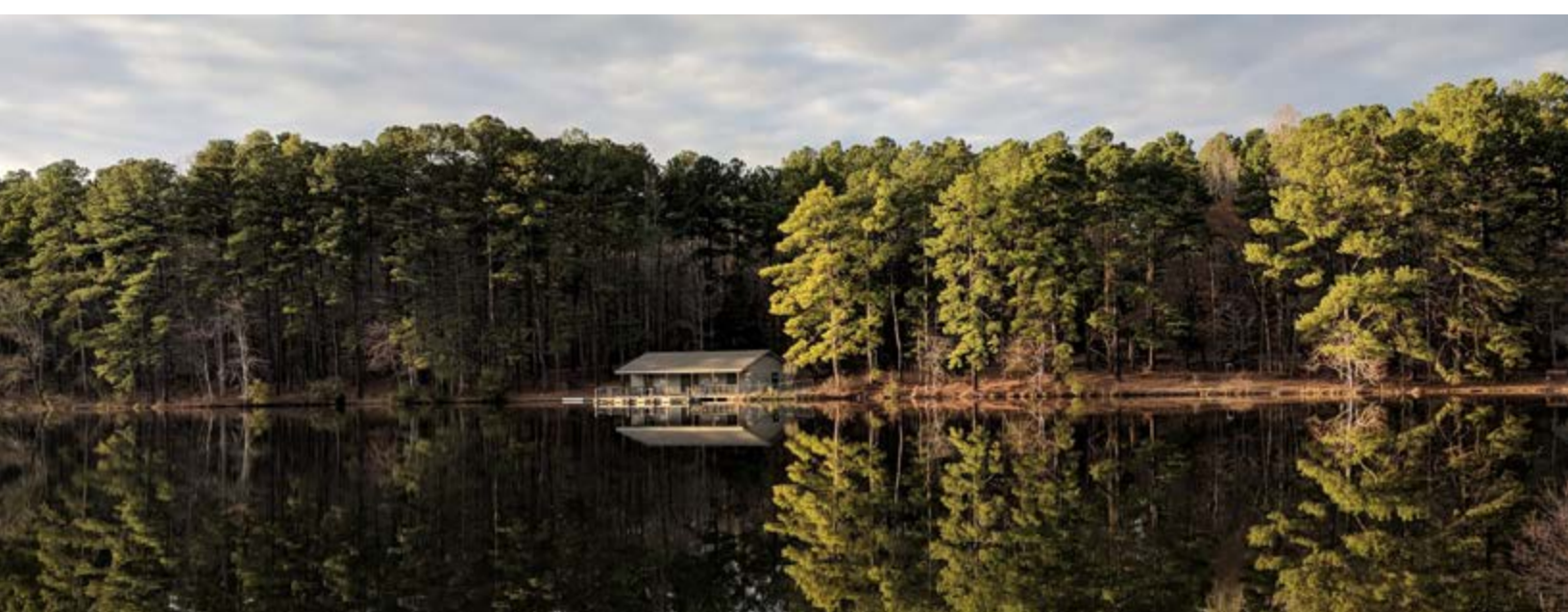


# Why do we connect people and nature through education, conservation, and experiences?

**Connecting** people and nature builds stronger, healthier, and environmentally sustainable communities. The development of meaningful connections to nature builds stronger communities by creating resilience, promoting social harmony, strengthening family bonds, and empowering individuals through building self-confidence while fostering the development of problem-solving skills. Furthermore, spending time in nature has been proven to promote physical and emotional health and well-being.

Early and repeated exposure to the natural world through **education and hands-on experience** is one of the best ways to foster a sense of stewardship. Increasing awareness and knowledge of the interconnectedness of the natural world and humanity's role in it, combined with meaningful experiences, can inspire change and informed decision-making, ultimately moving individuals toward becoming better stewards of the earth.

**Conservation** of natural ecosystems and the preservation of green space offers a broad range of benefits, including improved water quality, flood control, improved soil health, and preservation of biodiversity. The preservation of forests, in particular, reduces local air pollution that impacts our community's health. Forest preservation is also one of the most effective and cost-efficient nature-based climate solutions to helping curve the negative impacts of global climate change.





# Our Impact at a Glance

*How do we connect people to nature?*



## Education and Interpretation

We served more than **5,600 PEOPLE** through **450 PROGRAMS** that served families, children, adults, seniors, and school children and teachers and mentored **9 interns and work-study students** who provided more than **1,100 hours** of service.



## Manage and Protect

We managed and protected more than **600 ACRES** of forest, lakes, rivers, and wetlands that provide a home to many rare and endangered plants and animals.

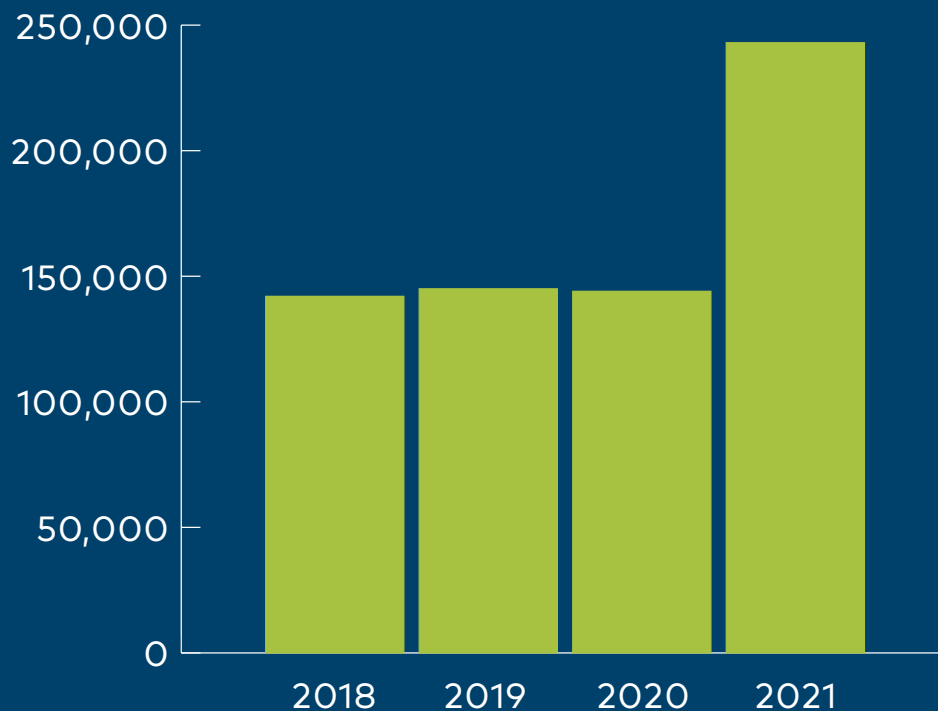


## Access and Enjoyment

We provided access and enjoyment to more than **243,000 VISITORS** on our **4 SITES** which includes nearly

# Our visitation was up more than 70% this year!

This graph represents visitation over the last 4 years in sequential order from 2018 (left) to 2021 (right).







## We Educate and Interpret

We develop educational programming that is hands-on, engaging, and diverse to accommodate the needs of our community. Our goal is to develop a city that is aware of and concerned about the local environment and has the knowledge, skills, attitudes, motivations, and commitment to work individually and collectively toward solutions for a more environmentally sustainable future.



*This year, despite the Global Pandemic, we served more than **5,600 PEOPLE** through our more than **450 PROGRAMS** that served families, children, adults, seniors, as well as school children and teachers.*

# Nature Program Area

The Nature Program Area offers outreach through programs delivered in school and natural areas throughout the City of Raleigh. Nature Educators provide hands-on experiences for students that correlate to the North Carolina Standard Course of Study's grade-level science curricula and early childhood standards for the preschool curricula. When possible, programs integrate literacy, math, and/or social studies elements based on the grade-level standards.

**Due to the Global Pandemic, Nature Programs sought out creative ways to reach the community and connect students, teachers, and parents to nature during this challenging year.**



**Field Trip Programs** – The 2020-2021 school year saw many classrooms operating in a virtual or hybrid format and unable to take field trips to our parks and preserves. Nature Programs developed a variety of initiatives to support area teachers and their students.



**At Home with Nature** was a monthly resource that contained recordings, activity ideas, and literacy and math connections – all centered on a nature theme and tied to NC Learning Standards. The development of virtual programs provided new ways for students to connect with City of Raleigh Nature Instructors in their homes and classrooms.



**The Neighborhood Ecology Corps** – NEC, a program delivered in partnership with the Center for Human-Earth Restoration, used a virtual platform in addition to in-person opportunities to engage middle-and high-school students in observation studies, restoration efforts, and experiential learning as part of a three-year program focused on fostering environmentally literate citizens.





**Park check-in videos** were recorded and distributed, providing students a safe, close-up look inside many of our Raleigh Parks and Preserves from their homes or classrooms. Additionally, teachers were provided with curriculum enrichment ideas and tools to incorporate environmental science into their classroom instruction confidently.



*“Thank you for the wonderful program today! Nicholas and Sophie have been inspired by it all day long – it has prompted endless creative play at home and many stories about our planet’s wild creatures. I loved it as well.”*

—Elizabeth King  
Parent of Public Program attendees

*“We love our monthly programs provided right here on our school campus. Not only do the programs fully engage our students, but the time spent together also fills them with so much knowledge and enthusiasm. The programs are beautifully thought out and beautifully executed.”*

—Sophie Fisk  
Director, Language Planet Montessori School



## Site-Based Programming

Our sites support a wide range of educational programs and events that bring participants of all ages and abilities into a deeper connection and understanding of our natural world.



### ***Southeast Raleigh YMCA Youth***

**Partnership** – Walnut Creek Wetland Park was excited to partner with Southeast Raleigh YMCA Youth Programs to provide pollinator and water quality education to elementary school students. Funded by a grant from Duke Energy, the program culminated in the students planting a pollinator garden on the Beacon Ridge campus, where the Southeast Raleigh YMCA is located.



**Walnut Creek Wetland Mystery** – At this family-friendly, socially-distanced outdoor event, families visited various stations learning about how the wetland animals have adapted to winter, and along the way, collected clues to solving the wetland mystery: "Who has been making mischief?" Why the Raccoon (AKA "Trash Panda"), of course!







**Pop-up programming** was popular this year during COVID. These tables made it easy to offer activities to park patrons while also educating them about the local flora and fauna. Example pop-up table themes included pollinators, reptiles, amphibians (with help from our animal ambassadors), and a table showcasing black birders and black authors for black history month.



**ESL-youth from Refugee Hope Partners** enjoyed a group program at Wilkerson and especially enjoyed observing Wilkerson's deer and spotting a wild turtle basking in Wilkerson's Pond.



**Wilkerson Statewide Star Party** – This mini-event was smaller than in years past and socially distanced, but all participants still enjoyed an evening of space-themed family-friendly STEM activities!



**Exploris Middle School Field Trips to Walnut Creek** – Walnut Creek Wetland Park provided the entire 8th grade with field trips that supported their coursework focusing on **Water Quality and Environmental Justice**



# Departmental Support and Collaboration

Our Nature Preserve and Program Team supports the PRCR Department by providing programs, instruction, or sharing subject matter expertise.



**Forest Ecology with Wilkerson Staff** – Wilkerson staff led a Forest Ecology program for youth from Triangle Environmental Justice Academy at Forest Ridge Park.



**Dix-based Youth Conservation Corps** – Wilkerson supported Dix-based Youth Conservation Corps staff and provided a special program called “Meet an Endangered Species,” highlighting management of the Federally Endangered Species, the Michaux’s Sumac.



**REC Program Support** – During the height of the pandemic, the City of Raleigh Parks, Recreation and Cultural Resources opened Recreation and Education Centers throughout the city to respond to the needs of working parents seeking care for their school-age children. The Nature Programs Area provided ongoing nature programming for the students served in these centers.



**Camp Kaleidoscope** – Debbie Huston, Raleigh Parks Financial Assistance Program Administrator, wrote and received a grant from Kaleidoscope to support a week-long nature-based summer camp for preschoolers experiencing homelessness and whose families were living at the Raleigh Rescue Mission. Walnut Creek Wetland Park was the camp’s host site, and staff served as an educational partner alongside Debbie and her team.



## Work-Study and Internships

Work-study and internship opportunities help our team meet its goals by providing real-world and practical experiences that connect to students' learning in their classrooms. These opportunities offer a valuable experience that helps guide future career choices, help develop the students' knowledge and skills while supporting our sites reach their land management and educational goals.

7

Number of Work-Study  
Students

593

Total Work Study  
Hours worked

2

Number of Mentored  
Internships

600

Total internship hours  
worked

**1,193 TOTAL HOURS WORKED**

*"I've been working with Wake County Open Spaces for several months now and am still doing a lot of conservation and invasive plant work. We actually do a good bit of work with granitic flat rocks, and manage a population of Michaux's sumac - so I'm still using a lot of what you taught me at Wilkerson!"*

—Robbie Whiting

*Former NC State Intern at Wilkerson and is now pursuing employment in the conservation field*

**Operation #TeetoTote** – Camille Ingram represented the Raleigh Parks Department during her 10-week term Climate Internship Program. The internship was a partnership developed by the Office of Sustainability and Partnership Raleigh and was mentored by Amy Eckberg, Durant and Horseshoe Farm Manager.

Camille's project, affectionately called "Operation #TeetoTote," aimed at rescuing old City of Raleigh t-shirts from the landfill by turning them into reusable tote bags. The project mission was also to reduce the use of single-use plastics. Camille partnered with Activate Good, a local volunteer organization over Earth Day, to convert 300 shirts into totes saving an estimated 10,000 grams of CO<sub>2</sub> if each bag is used only once. The totes were distributed to new City of Raleigh staff to demonstrate the City's commitment to sustainability, our summer campers, and to community members through Roberts Park and Ralph Campbell Community Centers. Several summer campers adopted the project as an activity, and we even made friendship bracelets out of the scrap materials to make this a truly zero waste project!



*Camille Ingram*



*Monica Hernandez Rodriguez*

**Max Intern** (formerly known as the Diversity in Conservation) - Walnut Creek applied for and received a Max intern through a partnership with Conservation Trust for North Carolina. Monica Hernandez, a rising senior at East Connecticut State University studying biology, worked with Walnut Creek Wetland Park for more than 400 hours over two months. Monica led a week-long Girls in Science camp for minority middle schoolers. She spent three weeks working with two high school students in the Catalyst program (which places students with disabilities interested in STEM careers and career exploration volunteer positions).





**NC State work-study at Wilkerson** – Wilkerson hosted 5 Students in FY 21. They used GIS technology to map and perform health checks on over 100 Ash Trees, surveyed for NCNHP-listed rare plant species, monitored songbird nesting in nest boxes and through bird-call surveys, supported preparations for and post-burn activities at Wilkerson's prescribed burn, and worked with COR staff to construct educational garden and habitat enhancements in the Preserve.

The Fall 2020 Wilkerson Work-study crew: Robbie, Hadley, Hannah, and Elijah





# Youth Leadership in the Environment

Creating strong, healthy, sustainable communities and environments depends upon healthy and engaged youth. Our environmental youth leadership programs and partnerships promote youth development in many ways, including environmental education, career development, and access to healthy open spaces. With experiences, education, and conservation as our mission, we're supporting the next generation of environmental leaders and helping them contribute to a thriving economy, healthy environment, and social justice.



***Park and Recreation Youth Conservation Corps*** – This year, we embarked on a collaborative, inaugural effort known as the Partnership Raleigh Parks Youth Conservation Corps. The City of Raleigh Parks, Recreation, and Cultural Resources Department and the City of Raleigh Housing and Neighborhoods Department teamed up this summer to offer a program aimed at youth aged 16 to 18. The program provided teens the chance to experience nature and expose them to natural resources and conservation career paths through service-oriented projects in our parks and preserves. The program encourages youth who might not traditionally seek out this work to see the opportunities there are to make a difference in the field of natural resources. During the final week of the program, their capstone project was to plan, create, and lead a volunteer service project related to what they learned during their term.







**Teen Service Days at Walnut Creek** – WCWP hosted multiple teen service days for litter pickup or invasive removal to correspond with teacher workdays and school holidays.

**Teen Conservation Experiences Program at Walnut Creek** – Each Sunday throughout the summer, WCWP staff introduced topics such as testing water quality, testing soils, using camera traps, and more. It was the first year offering this program, and it was a huge success.



**Catalyst Program at Walnut Creek** – WCWP hosted two Catalyst volunteers for three weeks. Catalyst participants are teens with disabilities who have a strong interest in STEM careers.





## We Manage and Protect

Our sites contain examples of high-quality plant and animal populations, natural communities, and ecosystems that contribute to biodiversity and environmental health. We manage and protect our natural areas using best management practices to sustainably balance the protection and enhancement of the natural areas while providing access to explore them.



*We manage and protect more than 600 ACRES of forest, lakes, rivers, and wetlands that provide a home to many rare and endangered plants and animals.*



## Management

We use best management practices and strategies such as prescribed burning, non-native invasive plant removal, and habitat restoration to enhance the biological diversity and increase the health of the habitats found on our sites.



**Wetland Restoration** - 12 young adults, under the umbrella of American Conservation Experience (ACE), worked for five weeks at WCWP, removing invasive plant species and replacing them with over 3000 native plants. The Conservation Fund funded this project.



**Prescribed burning at Wilkerson** – In March, NC Forest Service led a Prescribed burn to burn off the ground litter at Wilkerson Nature Preserve on a small parcel by the Preserve office.



**New Bluebird boxes**, complete with predator guards, were installed at Durant and Horseshoe Farm Nature Preserves in response to an increase in predation attempts at nest boxes.





**Stream Restoration at Durant** – A stream that begins at the outfall of a stormwater control measure (SCM) and flows into Lower Durant Lake has created a sizeable erosional gully. To ensure continued patron safety and to protect existing infrastructure, Stormwater hired a consultant to begin exploring options to repair the stream in November 2020. This study aimed to assess the feasibility of restoring the stream and repairing the erosional gully that has formed. The study looked at how to stop active erosion of the streambanks. Improvements will reduce the amount of sediment pollution in the Perry Creek watershed.

In collaboration with colleagues across the City, Durant staff have reviewed the study and initial design options and worked with the consultants to help determine the best options and the next steps for the project.

The goals of this restoration project are:

- To reduce active erosion of the streambanks and stream bed and reduce sedimentation into the Lower Durant Lake
- Improve park aesthetics of the stream channel
- Provide a safe and educational experience for park patrons

We are looking forward to moving the project forward in FY22.



**Chimney Swift Tower** – In partnership with Wake Audubon Society, Horseshoe Farm applied for and received a grant to support the building and installation of a chimney swift tower. Wake Audubon also supported the development of interpretive signage to help educate the community on Chimney Swifts.



## Research

We partner with local universities and organizations, work with volunteers, and mentor students to conduct research that helps us make the best management decisions for our preserves and the species who live there.

**Camera Traps** – The use of camera traps allows us to document the biodiversity of mammals within our parks, monitor changes in populations or species over time, and often document mammals that we wouldn't otherwise see. This year, some fun findings were a river otter at Horseshoe Farm, a long-tailed weasel, and an ear-tagged adult male coyote that was part of a research study by NCSU College of Veterinary Medicine at Walnut Creek Wetland Park.

We also use the images to educate the community in our "Caught on Camera" Series in the Nature Connection Newsletter.



**Hydrology Testing at Horseshoe Farm** – Two NC State students, performed hydrology testing at Horseshoe Farm Nature Preserve to provide information regarding the feasibility of creating a wetland habitat zone. Their research indicates that we may be able to restore the water-retention capabilities of this site and return it to more of an upland wetland. The benefit of upland wetlands is that they are typically free of fish, which feed on insect and amphibian eggs/larvae and drastically reduce breeding success and biodiversity rates for these species. An upland wetland provides more protection and can promote a greater diversity of amphibian species. Plus, upland wetlands are increasingly rare because they are usually less protected and are frequently drained for development.

**Citizen Science** – The Natural Resources section is increasing citizen science opportunities to connect people to nature, engage the community in the scientific process, and obtain natural resource inventory data to assist us in developing our management plans.

	Total Participants	Total Observations	Total Species
DNP	9	66	55
HSF	6	36	31
ALW	8	44	39
WCWP	4	154	109
FRP	2	63	59
LKW	3	85	78
LKJ	8	33	30
<b>TOTALS</b>	<b>40</b>	<b>481</b>	<b>401</b>

**City Nature Challenge (CNC) within City of Raleigh Parks, Recreation and Cultural Resources**

– The CNC is an annual four-day global bioblitz held at the end of April, where cities are in a friendly and collaborative competition to determine which city can gather the most observations of nature, find the most species, and engage the most people in the event. This year CNC decided not to make it a competition due to the COVID-19 pandemic; however, of the 418 metropolitan areas around the world on six continents, only 15 regions logged more observations than the Triangle area.

	# of Identified Species	# of Organisms Observed
Amphibians	8	17+
Reptiles	11	31+
Birds	64	308+
Mammals	6	15+
Insects, Arachnids, Mollusks, & Other Invertebrates	66	212+
Vascular Plants	173	-
Fungi & Other Non-Vascular Plants	25	-
<b>Total # of observations ID'd to species</b>	<b>353</b>	<b>583+</b>

**BioBlitz at Horseshoe Farm Nature Preserve** – In partnership with Wake Nature Preserves, a bioblitz was conducted at Horseshoe Farm Nature Preserve. Experts in various natural resource fields, alongside many from our Nature Preserve Team, spent the day inventorying the plants and wildlife to provide essential data that will help steer the management decisions moving forward.





**Find it Fridays** – This year, the Natural Resources Section initiated Find It Fridays. During these events, participants use the free iNaturalist smartphone app to collect observations of plants, animals, insects, and other living organisms found within Raleigh parks and nature preserves. Nature Preserves hosted 7 FIF events, with more than 30 participants helping us increase our species inventory at each site.

**Project NestWatch and Feeder Watch Program at Durant, Horseshoe Farm, and Wilkerson**

NestWatch is a nationwide nest-monitoring program designed to track status and trends in the reproductive biology of birds. FeederWatch is a November-April survey of birds that visit backyards, nature centers, community areas, and other locales in North America. Wilkerson, Durant, and Horseshoe Farm Nature Preserves participate annually in the programs, contributing to the nationwide data.

Species	Total # nesting attempts	Total # fledglings
Carolina Chickadee	15	12
Brown-headed Nuthatch	3	0
House Wren (Northern)	12	34
Carolina Wren	3	10
Eastern Bluebird	42	53

*NOTE: The NCWRC lists Brown-headed Nuthatches in the latest NC Wildlife Action Plan as a "Species of Greatest Conservation Need."*



**Box Turtle Connection Project** – The Box Turtle Connection is a long-term study on Box Turtles (*Terrapene carolina*) in North Carolina. Their purpose is to learn more about the status and trends in Box Turtle populations, identify threats, and develop strategies for long-term conservation of the species. Volunteer lay-scientists become Project Leaders who help manage data collection at a specific site. Turtles are permanently marked and measured by the Project Leads, and data is entered into a database managed by the NC Wildlife Resources Commission.

This year, three of our sites, Durant, Horseshoe Farm, and Walnut Creek Wetland Park, have joined the initiative, with two trained "Project Leaders." To date, 32 turtles have been marked and data submitted.







**Student Research** – NCSU Student Elijah Bradshaw assisted with (NCNHP Watch List) Autumn Coralroot Orchid population counts in October 2020. Coralroots are one of many species at Wilkerson, with populations closely tracked. Elijah developed his own independent student research project in the Spring of 2021, testing the relationship between birds nesting and native tree species abundance, using Wilkerson as an observation site, and sharing his data with the Preserve. Elijah's results will be presented at the NCSU Undergraduate Research Symposium in Spring 2022.



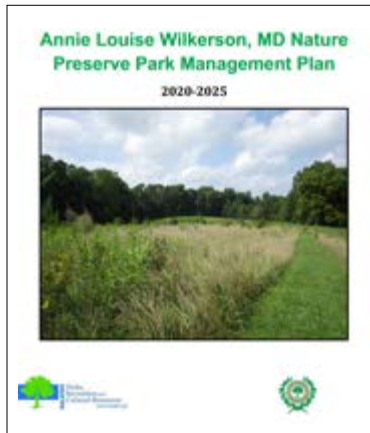
**Visiting Botanists** – Biologists from several state agencies (including Harry LeGrand, NCNHP, seen here) visited the Wilkerson Pea Prairie in 2021 to observe its progress and examine "resurrected" species, such as the Red Wood Lettuce, not seen in our region within the lifetime of most professional botanists.



**Permanent Preservation** – Pressed specimen of Red Wood Lettuce (*Lactuca hirsuta*) from Wilkerson Nature Preserve, prepared by Wilkerson staff for permanent preservation in the University of North Carolina-Chapel Hill research collection. This is the first specimen of this native wildflower species collected in the North Carolina Piedmont in over 50 years.

# Planning

We have initiated the development of land management plans for our preserves and nature parks to help allocate resources, provide a strategy to manage and protect resources while providing access to them, and establish systems to monitor and evaluate the health of resources and effectiveness of management practices over time.



***The Wilkerson Management Plan*** – November 2020 – Wilkerson Natural Resources Management Plan is formally “approved” by PRCR Department. Numerous management actions have followed, with over 700 plant species photographically documented at Wilkerson and hundreds of documented animal species.

***Next up, Horseshoe Farm*** – Initial work has begun on a Horseshoe Farm Nature Preserve management plan.

## ***Management Plan for Invasive Species Management at Walnut Creek Wetland Park –***

As part of the contract between The Conservation Fund, the City of Raleigh Parks, and American Conservation Experience (ACE), a plan for managing invasive plants species within the park was created by ACE. While this plan is not yet final, it will be an excellent template in the future for tackling the problem in a logical and manageable way.

***Upper Lake Study*** – The dam and spillway of the upper lake at Durant were determined to be deficient and in need of repair. A study was conducted to explore options to maintain the area and protect the preserve. Durant staff and other City of Raleigh partners gathered feedback about the most important experiences to the community when visiting Durant Nature Preserve. The feedback and recommendations were shared to help determine the direction of the repair and habitat enhancement.





One of the many native wild peas in the Wilkerson Pea Prairie, *Lespedeza xbrittonii*, a rare, naturally occurring hybrid between two other native *Lespedeza* species (all members of the pea family). Our specimen is one of the first times this natural hybrid has been documented in North Carolina.

# Resurrecting Wilkerson's "Pea Prairie"

## A Bit of History:

Historical descriptions of the Carolina Piedmont inspired the Wilkerson "Pea Prairie" project:

As written in 1846 -

*"Emigration was encouraged and directed very much in its earliest periods, **by the vast prairies, with pea-vine grass** and canebrakes, which stretched across the States of Virginia and Carolina. There are large forests now [in 1846] in these two States, where, a hundred years ago, not a tree, and scarce a shrub could be seen."*

As written in 1859 -

*"As late as 1775, the **woodlands, carpeted with grass, and the wild pea-vine, growing as high as a horse's back, and wildflowers of every hue,** were the constant admiration of the traveler and adventurous pioneer...**The trees were generally larger and stood so wide apart** that a deer or a buffalo could be easily seen at a long distance—there being **nothing to obstruct the view** but the rolling surface...**The pea-vine and grasses occupied the place of the bushes and young forest growth** that render the woods of the present time so gloomy and intricate."*

After the mid-1800s, the pea-vine community disappeared completely:

As written in 1869 -

*"In many places, the wild pea-vine grew as high as a horse's back, and the blossoms were very plentiful. **This pea was a stalk rather than a vine. It has utterly disappeared from the country.**"*

In "resurrecting" the historic Pea Prairie community, it is essential to note that the historical term "pea-vine" did not refer to a single species – it was used to describe a variety of wild members of the pea family, including some that were more stalk-like rather than vine-like. The more "stalked" wild peas can grow up to 4 or 5 feet tall – roughly the height of a horse's back. With wild peas of multiple species present, there would be flowers in various colors. Other non-pea wildflowers mixed into the community would contribute to the historic appearance of "wildflowers of every hue."

No seeds or plants were added artificially to the Wilkerson Pea Prairie – the only plants present are those that could be awakened from the site's soil. The result is an authentic plant community that closely matches the available historic descriptions (except that it is no longer "vast"). Over a dozen native pea species spontaneously appeared in the resurrected Wilkerson Pea Prairie's 0.1-acre space, including both vine-like and stalk-growing species, as well as many native non-pea wildflowers.



As it was written in 1833:

***"I have often been told by the old people, of the astonishing luxuriance of the tall wild pea vine, in old times...its vines, leaves, and fruit were greedily devoured by horses, cows and sheep. So that its very value seems to have caused its utter extermination. With so much worth and so many enemies, is it not entitled to a single friend?"***

No chemical herbicides, no fertilizers, no irrigation, no seed mixes, or purchases of plants were needed. What the long-lost "prairies, with pea-vine" need most is simply the help of some friends.

## A Little Help from a Friend- The Story of Success



**July 2020** – Wilkerson staff and YCC Team helps remove dense, overcrowded shrubbery. Shrubbery removal creates a sunny, open woodland, but herbaceous plants are very low, sparse, and over-browsed.





**Winter 2021** – NCSU work-study students helped build deer-exclusion fencing to reduce browsing and supported a prescribed burn led by the NC Forest Service in March of 2021 to burn off the ground litter.

**Summer 2021** – A diverse herbaceous groundcover emerges within the enclosed burn area as summer approaches.



By the late summer of 2021, a dense, lush growth of native wildflowers covered the burned area. Stalks of flowering wild peas, many 3-4 ft tall, bloom with violet flowers in late summer 2021.



**AND THEN..... A Resurrected Species!**  
**June 2021** – A native wildflower, common a century ago but not documented in the North Carolina Piedmont for over 50 years, emerged in the "Pea Prairie" in June 2021. Red Wood Lettuce (*Lactuca hirsuta*) is a wild relative of our edible lettuce, recognizable for its strongly red-purple buds and stalks and yellow-red flowers. Once abundant, it is now listed as Endangered, Threatened, or Rare in many states. Pictured below is the Red Wood Lettuce, blooming again in Raleigh for the first time for over 50 years.





***Before Resurrection – July of 2020 –***

There is a dense thicket of weedy shrubs & saplings with limited herbaceous plants in dense shade.



***After Resurrection – Summer of 2021 –***

Widely spaced trees with a high canopy and a lush carpet of herbaceous plants

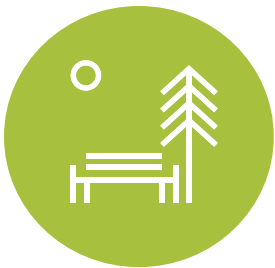






## We Provide Access and Enjoyment

We provide diverse opportunities for the community to experience and connect with nature by offering recreational opportunities, space for family and community gatherings, life events and business meetings with a natural backdrop, or quiet spaces for contemplation and nature appreciation to meet the needs and comfort of ALL.



*During the pandemic, access to natural spaces became increasingly important as places of refuge, solace, and connection. This year, we provided access and enjoyment to more than 243,000 VISITORS on our 4 SITES, including nearly 9 MILES OF TRAIL, educational nature centers, indoor classroom and lab space, and rentable shelters, event venues, and meeting space. Additionally, we provide access to other green areas throughout the city through public and school-based programming.*



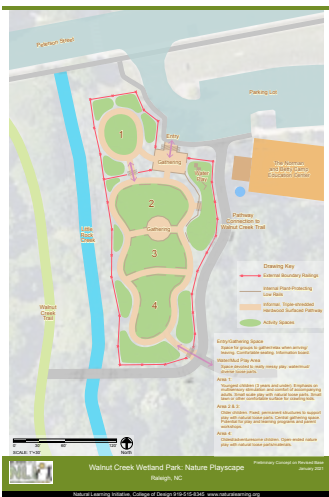


**Barillete de Esperanza (Kite of Hope)** – Walnut Creek Wetland Park was chosen to exhibit the Barillete de Esperanza (Kite of Hope), a traveling exhibit from the Guatemalan Consulate. The 8-foot diameter kite constructed from bamboo and tissue paper represents the struggles of Guatemalan immigrants during the pandemic.

This traditional giant kite was created for Family Day of Guatemala by Guatemalan artist Cristina España, vice-consul, Consulate General of Guatemala in Raleigh, and her husband, Nathanael Sperger.



**Fairy Villages and Nature Play** – Wilkerson opened a "Fairy Forest Village" in the winter, which allowed many families to spend time outdoors in a socially distanced way, enjoying imaginative play in nature.



**Nature Playscape** – Walnut Creek Wetland Park worked with Natural Learning Initiative with funding from Partners for Environmental Justice to design the Concept Plan for a Nature Playscape. Community partners supporting the project's design are Partners for Environmental Justice, The Autism Society, and The School for the Deaf, as well as Raleigh Parks Specialized Recreation and Inclusion Services

**Play Pockets** – Walnut Creek Wetland park installed several "play pockets" along the Ross Andrew's trail that provides the opportunity for families to engage in unstructured free play within the park. These play pockets were inspired by children's natural curiosity in nature, their inclination to pick up natural objects and items as they explore the world around them. The hope was to encourage this natural curiosity, allow space and time for visitors to slow down while on a walk in the park, and inspire play outdoors.





**Durant Sensory Garden Re-built** – In February 2020, Durant was severely impacted by a large storm that destroyed their sensory garden, a space full of textures, smells, and sounds and designed to be therapeutic, relaxing, and educational.

In 2021, the Durant team re-opened the garden, complete with nature play spaces for children, including a tree sculpture bench carved by local artist Corey Lancaster with Boon Hill Gallery. The tree fell during the storm.







***New Wayfinding Signage at Durant*** – Durant Nature Preserve installed new wayfinding signs this year to enhance visitors' experience on the trails.



***Soft surface trail development*** – With the help of two work-study students from NC State University, WCWP created an additional soft-surface trail to mimic where an accessible trail will be installed later in 2021 or 2022, as part of a 2014 Parks Bond project.



***Accommodation of the Ever-increasing Need for Green Space*** – In response to the increased demand for parking, Wilkerson staff worked with Parks staff to install several new parking spaces, growing Wilkerson's visitor capacity maximum for peak times.

## Art in our Parks



**Music in the Meadow** – Young musicians provided an outdoor, socially distanced “pop-up concert” at Wilkerson in the spring of 2021.



**Hidden Rocks Sculpture** – Supported by Raleigh Arts, Sculptor Scott Hazard stands beside his newly installed metalwork “Hidden Rocks” in fall 2020, inspired by Wilkerson’s boulders, native prairie grasses, and history.

The “Hidden Rocks” Sculpture was more than a Public Art project to enhance the Wilkerson Office’s front entrance; it was also a landscaping project to which many people contributed, including volunteers from a Raleigh charter high school, NCSU work-study students, and Wilkerson staff.



After the sculpture was installed, local high schoolers volunteered to help install the rockwork (using local stone recycled from the foundations of Dr. Annie’s old cow barn) that visually anchored the “Hidden Rocks” sculpture.

*“I was raised in the country, and being out here in the woods, I can just feel the stress draining from my body.”*

—Walnut Creek Visitor





## Partnerships and Volunteers

Volunteers, collaboration, and strategic partnerships are fundamental to who we are, what we do, and how we do it. We want to take a moment and THANK our 2020-21 partners and volunteers - without whom; we would not be able to achieve our goals.



### *Nature Preserve Volunteers for FY 2020–2021*

<i>Number of Volunteers</i>	<i>534</i>
<i>Total Volunteer Hours</i>	<i>1,633</i>

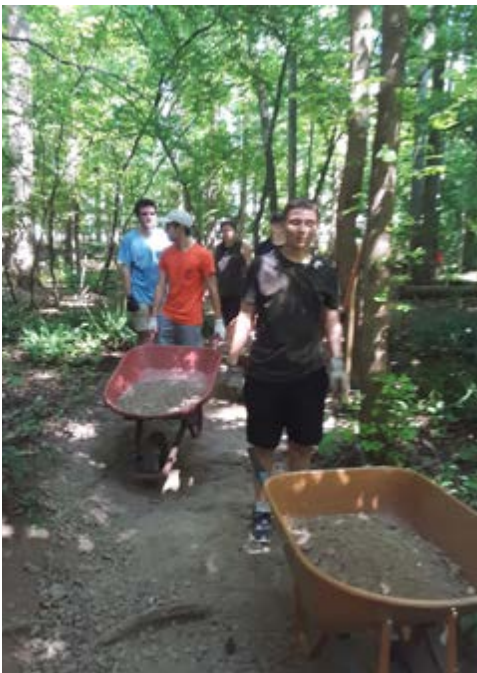


## The Boy Scouts and Girl Scouts provide a tremendous amount of support to our sites.



### ***Eagle Scouts Assist Durant in Trail Repair and***

***Maintenance*** – Ben’s Eagle project helped complete major trail maintenance and improvement project on a badly degraded section of the Border Trail at Durant. His project was physically demanding, and it suffered setbacks due to flooding and stormwater issues. Despite it all, he could finish his project on time and in great spirits!



Joseph’s Eagle Scout Project helped complete a storm damage restoration and trail re-route project on Durant’s Secret Creek Trail. He cleaned up approximately two acres of storm damage, repaired a quarter of a mile worth of trail tread, and re-routed a sixteenth of a mile of badly degraded trail.



### ***Sowing Seeds at Wilkerson –***

Girl Scouts volunteered to help plant seeds in Wilkerson’s garden on Earth Day, 2021, which bloomed in early summer.





**Enlisting the community's help** - Durant Nature Preserve utilized volunteers to help with storm damage cleanup. In just four volunteer days, volunteers were able to drag brush, create brush pile habitats, and stack firewood and smaller logs, cleaning up almost a whole quarter of a mile worth of trail by hand! This was a series of volunteer days where every volunteer that participated could see the fruits of their labor and were happy to have helped.



**New turtle basking platforms** were installed for the pond turtles at Annie Louise Wilkerson Nature Preserve by Eagle Scout candidate Zane Kountis. Zane's platforms were immediately popular with Wilkerson's turtles and improved the turtles' habitat.



**Working with partners to tackle mutual goals** - Christopher M. Baranski, Northern Piedmont Management Biologist with the NC Wildlife Resources Commission, visited Wilkerson to plan a successful effort to remove invasive plants growing on the shared Wilkerson/NCWRC Game Land border zone.



**Wilkerson on the Map** – Wilkerson staff worked with Army Corps of Engineers staff and Friends of the Mountains-to-Sea Trail on the design for a new kiosk display at the Raven Ridge Road MTS Trailhead to now include Wilkerson Nature Preserve, its trails and amenities and how to reach them from the Mountains-to-Sea Trail.



**Student volunteers, Future Educators** – Rachel Fellman, one of two students from NCSU who shadowed Wilkerson nature program instructors and then planned and led a nature program (as volunteers) of their own as part of their Environmental Education coursework, led a program on the Importance of Insects for a group of Brownie girl scouts.



**Connecting the community to local experts** – Durant and Horseshoe Farm partnered with Wake Audubon to provide participants the opportunity to learn about local bird species through bird hikes and the introduction of helpful tools like Merlin Bird ID and eBird to document their sightings.



# Fred Fletcher Awards

This year The Nature Preserves and Programs Team had the distinction of having 5 of their nominees for the prestigious Fred Fletcher Volunteer Awards Program selected as winners. We are so grateful to have a dedicated contingency of caring people who help support our parks and preserves by volunteering their time and talents.



## ***Outstanding Individual Financial Contributors – Jon and Susan Harmer***

Jon and Susan Harmer have generously given financial donations to Durant Nature Preserve for several years. Through their generosity, Durant created new features in their interpretive garden spaces and increased accessibility and mobility throughout our trail system.



## ***Outstanding Adopt a Park Volunteer – The McCrary family***

George, Carol, and Samantha McCrary have been adopt-a-park volunteers with Durant for five years. They have selflessly given their time and talents to create animal costumes for park programs, helped maintain native gardens, and supported invasive removal and restoration work; the McCrary's have been instrumental in Durant's success.



## ***Outstanding Park Volunteer – David White***

David White has adopted a park volunteer with Durant for three years. During this time, Dave has become a fixture of the Preserve on Friday mornings. He can be found in and around one of our six interpretive gardens, either weeding, mulching, and trimming, or deadheading. Dave has been instrumental in helping us to keep our interpretive gardens maintained.





### ***Outstanding Volunteer Group – Girl Scout Troop 14***

Girl scouts Lottie, Skylar, Zara, and Grace from Girl Scout Troop 14 transformed three of Durant's plain brown recycling bins and turned them into a work of art to help promote recycling and sustainability at their large picnic shelter. The girl scouts had to do plenty of research about paints and primers to get their beautiful new designs to adhere to our cans. The final product is fantastic, and it is helping people correctly recycle materials after a shelter rental.

### ***Outstanding Project Volunteer – Sam Hershey***

#### **A Visitor Turns into a Volunteer**

Everyone who visited Wilkerson's trails could see the old barbed wire -- but Sam Hershey not only saw it, he contacted the Preserve offering to volunteer to help remove it -- and to return to the Preserve as many times as it took to remove it all -- and to invite as many friends as he could to help. Sam and his groups removed over 2,000 yards of rusted barbed wire (and other junk).







## Our Team

**From left to right:** Bonnie Eamick, Liani Yirka, Sara Steffen, Stacie Hagwood, Bryan England, and Sheryl McGlory.

**Bottom from left to right:** Jason Kiser and Kristi Moyer

**Not Pictured** - Our excellent part-time staff to whom we are incredibly grateful. Without their hard work, passion, and dedication, we could not fulfill our mission and provide the exceptional programs and services we do.

### ***Nature Preserves and Programs Director***

Kristi Moyer

### ***Annie Louise Wilkerson, MD Nature Preserve Park***

Preserve Manager - Bryan England

Preserve Assistant Manager - Bonnie Eamick (joined Sept. 2021)

### ***Durant and Horseshoe Farm Nature Preserve Parks***

Preserve Manager – Amy Eckberg

Preserve Assistant Manager – Jason Kiser

Preserve Assistant Manager - Sara Steffen

### ***Walnut Creek Wetland Park***

Park Manager – Stacie Hagwood

Park Assistant Manager – Liani Yirka



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