Turtle, 2020, Bill Stokes

The Lindsay Pettus Greenway

ENVIRONMENTAL EDUCATION EXHIBIT

Exhibits on the Lindsay Pettus Greenway were developed in collaboration with Arrants Outdoors, Catawba Riverkeeper Foundation, Katawba Valley Land Trust, US Fish and Wildlife Service, and the University of South Carolina Lancaster, with financial sponsorship provided by Duke Energy, US Fish and Wildlife Service, the City of Lancaster, and Lancaster County.

EXHIBIT INFORMATION

The exhibits design by Brittany Taylor-Driggers; text information was provided by Josh Arrants, Tripp Barrineau, Linda Blackwell, Robert Folks, Sherri Gregory, Ernest Jenkins, Kelly Murphy, Haley Tedder, and Lauren Thomas.

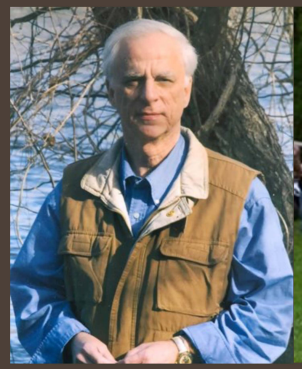
PHOTOGRAPHY PROVIDED BY

- Randy Hudson
- Bill Stokes
- Dick Christie
- Josh Arrants
- Sam Farris
- Lauren Thomas
- Berry Beasley
- Travis Bell Photography
- U.S. Fish and Wildlife Service

The Lindsay Pettus Greenway

Welcome

Located along the banks of Gills Creek, the Lindsay Pettus Greenway is the result of years of collaborative planning by people who envision Lancaster as a place where nature and people can thrive together. Use the Greenway as an alternative way to move throughout the City of Lancaster, as a path to safely exercise away from traffic, and as a place to rest, reflect, and reconnect in nature. The trail is designed to be accessibility friendly with hard-surfaced paths and boardwalks so all visitors can easily immerse themselves in the great outdoors. Visit often and experience the beauty across the seasons!



About Lindsay Pettus

A lifelong Lancaster County resident, Lindsay Pettus was passionate about protecting the Catawba River Valley's natural and cultural resources. For almost forty years, his leadership brought people together to preserve special places across South Carolina. Lindsay founded the Katawba Valley Land Trust in 1992. Because of his vision, over 11,500 acres of land and waterways are now protected. His persistent work to protect the land along Gills Creek allows us to enjoy this Greenway today.

> *"As we accumulated land along the creeks and floodplain, we realized that this would make a very nice walking trail. So, we began talking to our partners ... and it was the general consensus that this area should become a walking trail ..."*
>
> *-- Lindsay Pettus*

Greenway groundbreaking, 2019,
Kayla Vaughn

The Lindsay Pettus Greenway
Environmental Education Exhibit

Environmental Conservation and Education

Exhibits on the Lindsay Pettus Greenway were developed in collaboration with Arrants Outdoors, Catawba Riverkeeper Foundation, Katawba Valley Land Trust, US Fish and Wildlife Service, and the University of South Carolina Lancaster, with financial sponsorship provided by Duke Energy, US Fish and Wildlife Service, the City of Lancaster, and Lancaster County.

The Environmental Education area exhibit highlights flora and fauna—i.e. plants and animals— found along the trails. Starting along the Comporium Communication Trail Access, the exhibit follows the trail as it meanders along Gills Creek. The exhibit provides a sensory enhanced learning opportunity for visitors as they read about the value of healthy waterways and strategies to protect and enjoy nature.

What is a Conservationist?

A conservationist values the gifts of the natural world and seeks to preserve it. By visiting the Greenway, you can experience nature's beauty and learn to value it, too. Get involved with the Katawba Valley Land Trust to meet other local conservationists in Lancaster County.

Do you see yourself as a conservationist?

The exhibits were designed by Brittany Taylor-Driggers;
text information was provided by Josh Arrants, Tripp Barrineau, Linda Blackwell, Robert Folks, Sherri Gregory, Ernest Jenkins, Kelly Murphy, Haley Tedder, and Lauren Thomas.

(left to right)
Raccoons, 2020, Randy Hudson
Blue Heron, 2020, Bill Stokes
Butterfly, 2018, Dick Christie
River, 2020, Randy Hudson

Reflecting on our past *as we build our Future*

History along the Greenway

The Lindsay Pettus Greenway meanders along Gills Creek east to west through the City of Lancaster. As it flows west, it combines with Bear Creek, then with Cane Creek, finally spilling into the Catawba River. Native Americans crossed these creeks thousands of years ago, developing trading and hunting paths.

Aerial Photo of the Gills Creek Area,1965
Travis Bell Photography

Many years later, these routes would develop into travel routes for the Europeans who settled in the area. Lancaster's Main Street, which intersects the Greenway's route, lies on what was once known as The Great Wagon Road and connected many historic towns of the eastern colonies. Lancaster's first settlers located on high ground above the area's creeks, farming for subsistence and trade on the fertile bottom land.

As agriculture gave way to industrial manufacturing and Lancaster grew into a textile community, the open land along the creeks provided attractive home sites for the neighborhoods and commercial development that lie near the Greenway today.

Clinton Community Connections

The land from here to Barr Street has provided a fertile area for the growth of Lancaster's African American community.

Mount Zion A.M.E. Zion Church began in the early 1860's with support from the members of First Presbyterian Church. Bishop Isom Caleb Clinton (1830-1904) was a key figure in the A.M.E. Zion church, serving as Lancaster County Treasurer before and shortly after Reconstruction.

Barr Street School was founded in 1879, emphasizing both academic and vocational studies. The Barr Street School site continues to host vital educational programming for the community, including Hope on the Hill and the Barr Street Learning Center.

In 1953, Dr. John Jacob Clinton (1889-1974), a prominent African American physician and philanthropist, donated the land for the Clinton Elementary School to be established. In 1963, the Lancaster County Community Center was established by many business and community leaders, creating a centralized hub for organizing and hosting community activities.

Barr Street School, 2020, Sam Farris

The Lindsay Pettus Greenway continues this quest towards connecting people to one another for positive community growth and development.

Historical Land Acknowledgment and Traditions

South Carolina is home to several nations of Indigenous people that lived or traveled through its waterways. In our area, these connections are made to the Catawba Indian Nation. Having lived along the Catawba River and its waterways for centuries, the 'People of the River' have a rich record of history buried in the soil. Culturally, Catawba pottery is the oldest continuous native pottery tradition east of the Mississippi River. Catawba pottery is distinctively tied to the landscape. Catawba potters have been collecting their clay from along the banks of the Catawba River for generations.

Today, the Catawba Indian Nation is the only federally recognized tribe in South Carolina. Learn more by visiting the Native American Studies Center in downtown Lancaster.

Catawba Pottery and images from the USC.s Archive and Special Collections, 2013.
Brittany Taylor-Driggers

Nature's Pollinators:
More than just Bees

Bee, 2019, Bill Stokes

Jewelweed, 2019, Josh Arrants

When a pollen grain moves from the anther (male part) of a flower to the stigma (female part), pollination happens. This is the first step in a process that produces seeds, fruits, and the next generation of plants.

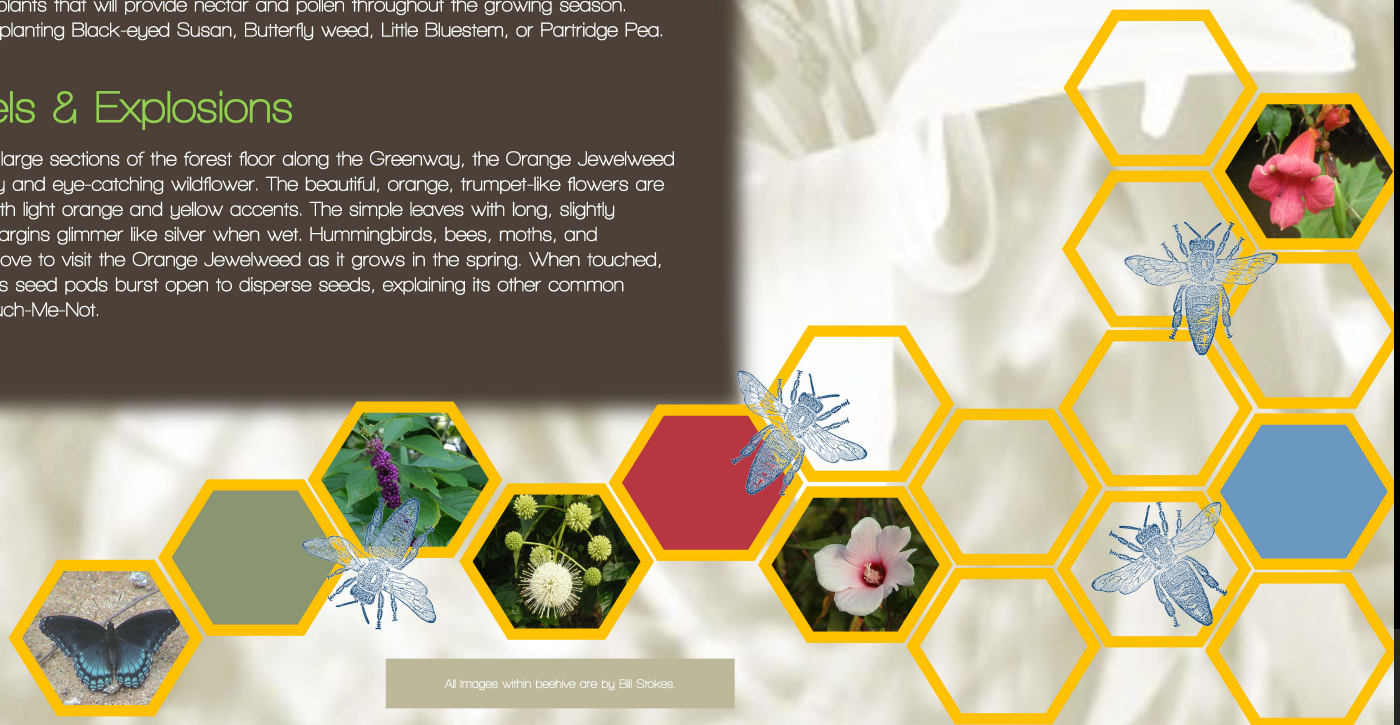
Pollinating animals travel from plant to plant carrying pollen on their bodies. Birds, bats, butterflies, moths, flies, beetles, wasps, small mammals, and most importantly, bees are pollinators. They visit flowers to drink nectar or feed off of pollen and transport pollen grains as they move from spot to spot.

Planting for Pollinators

Invite pollinators to your neighborhood by planting a pollinator garden. Choose a variety of native plants that will provide nectar and pollen throughout the growing season. Consider planting Black-eyed Susan, Butterfly weed, Little Bluestem, or Partridge Pea.

Jewels & Explosions

Carpeting large sections of the forest floor along the Greenway, the Orange Jewelweed is a showy and eye-catching wildflower. The beautiful, orange, trumpet-like flowers are spotted with light orange and yellow accents. The simple leaves with long, slightly toothed margins glimmer like silver when wet. Hummingbirds, bees, moths, and butterflies love to visit the Orange Jewelweed as it grows in the spring. When touched, the flower's seed pods burst open to disperse seeds, explaining its other common name: Touch-Me-Not.



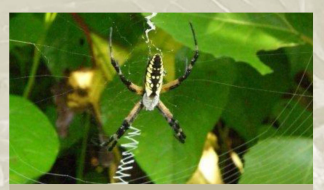
All images within beehive are by Bill Stokes.

Building Habitats & Ecosystems

Wetlands, creeks, rivers, lakes, and ponds are all considered freshwater habitats. While freshwater accounts for only 3% of the world's water, these areas are home to more than 100,000 plant and animal species! The specific types of plants and animals found in a freshwater community depend on conditions like water temperature, depth, and movement. Here are a few that have been spotted living around our local creeks and streams.

What plants or animals do you notice on the Greenway now?

Caterpillar, 2020, Bill Stokes



Spider in web, 2020, Berry Beasley

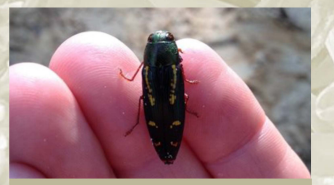
Snapping Turtle, 2020, Lauren Thomas

Great Blue Heron 2020, Bill Stokes

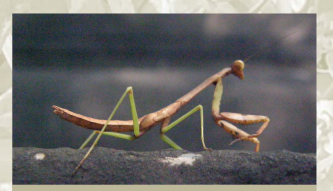
Baby Whitetail Deer, 2020, Bill Stokes

Cherry Millipede, 2019, Josh Arrants

Black and Silver Garden Spider, 2019, Josh Arrants



Red-Legged Buprestis, 2019, Josh Arrants



Praying Mantis, 2014, Bill Stokes

Plants and Seeds

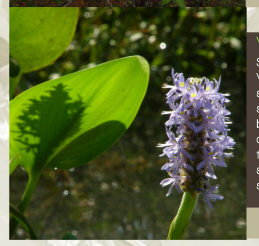
The plant and seed selection for the Greenway was based upon several important factors—the plants needed to be native to the area and prevent erosion. An erosion control seed mixture was chosen to seed all disturbed areas and mixed with native plants and native seeds to support habitat and ecological processes.

Red Maple Seeds, 2006, Bill Stokes

Trees

Native pond cypress and fringe trees were placed on the edge of the constructed wetland and on a non-irrigated slope to help with erosion. The fringe trees will provide seasonal fruits and flowers for the birds and other pollinators.

Dogwood, 2016, Bill Stokes



Vegetation

Spatterdock, Lizard's Tail, and Pickerel Weed plants create habitats and food sources for the Greenway's aquatic species. Lizard's Tail seeds can be eaten by ducks and become foliage eaten by deer. Pickerel Weed is a favorite food for turtles, while Spatterdock plants provide shelter for invertebrates, as well as a food source for muskrats and beavers.

Pickerel Weed, 2008, Bill Stokes

Protecting a Mighty Mussel

Culverts on Gills Creek Drive before replacement, 2017, U.S. Fish & Wildlife Service

Culverts on Gills Creek Drive after replacement, 2018, U.S. Fish & Wildlife Service

Carolina Heelsplitter, 2019, Morgan Wolf

Heelsplitter augmentation event, 2017, U.S. Fish & Wildlife Service

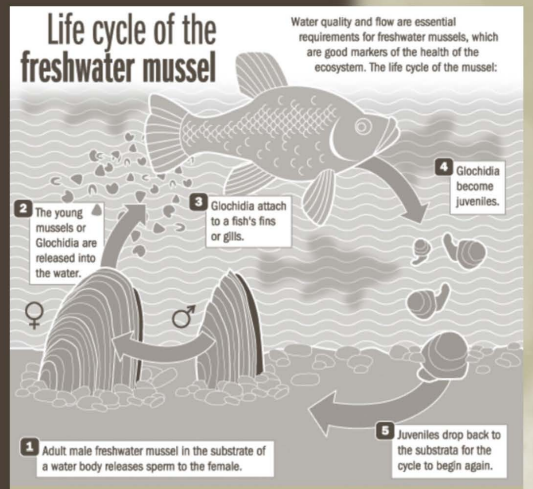
Carolina Heelsplitter, 2019, Morgan Wolf

The U.S. Fish & Wildlife Service Team, 2019

The Carolina Heelsplitter

The Carolina Heelsplitter is a freshwater mussel found only in South and North Carolina. The Carolina Heelsplitter is important to water quality, helping to filter the water that passes through it. Its presence in freshwater streams also tells us that the water there is relatively unpolluted. In 1993, it was listed as an endangered species. The Heelsplitter's survival is threatened due to poor water quality, erosion of stream beds and banks, and a loss of connected habitat due to commercial and residential development.

The U. S. Fish and Wildlife Service is working with partners throughout the state to help protect and restore the Carolina Heelsplitter's stream habitats. Greenway engineers worked with the Service to build the trail in such a way that protects the Carolina Heelsplitter and other aquatic species along Gills Creek.



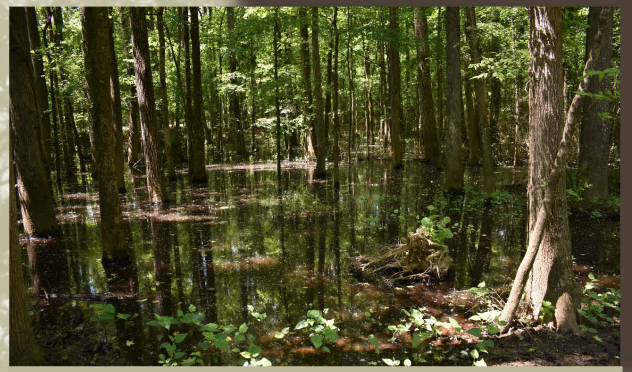
Host Fish of the Carolina Heelsplitter include the Bluehead chub, Golden shiner, Highfin shiner, White shiner, Satinfin shiner, and Bluegill
Lifecycle of a freshwater mussel, James Histon

What Can You Do To Help?

1. Keep trash out of creeks and rivers. Our local waterways are home to a variety of wildlife.
2. Leave trees along creeks. Tree help prevent erosion and decrease pollutants in our waterways during flooding.
3. Keep livestock out of the water. Animals can trample mussels, dig up their habitat, and introduce bad nutrients (feces) into our waterways.
4. Don't dump oil, herbicides, or other household chemicals down the drain or ditch.

What does 'endangered' mean?

A Toast to the Trees!



Along the Greenway, 2020, Brittany Taylor-Driggers

Trees are important for managing water runoff. Their roots take up water and help create conditions in the soil that promote filtration. The leaves help capture some of the rain on their surfaces where it can evaporate. The leaves also help reduce erosion by reducing the force of heavy rainfall before it hits the ground.

Planting trees around your home or community can help lower the heat index in summer and lower your cooling cost. Tree canopies provide shade and offer vital habitat for migratory birds on their journey. Trees can also absorb carbon dioxide and improve air quality.

What do you love about trees?

Baby Whitetail Deer, 2020, Bill Stokes

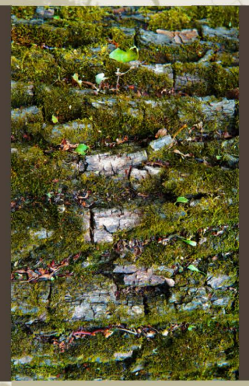
Can Trees Talk?

While scientists don't know for sure, the evidence is only beginning to unfold. Some forest ecologists believe that trees may live in cooperative relationships with one another, communicating and sharing resources through networks similar to insect colonies.

Do you think trees could possibly be talking to one another?

Tree Along the Greenway, 2020, Brittany Taylor-Driggers

For the Love of Moss



Moss can be found along stream banks, tree trunks, rocks, and on shady ground. It prefers cool, moist, shaded environments and can act like a sponge, soaking up moisture from rain to prevent erosion.

Moss has no roots, no leaves, no stems, and no buds. It uses tiny threads to anchor itself to stones, trees or the ground to grow.

What conditions make the Greenway a good habitat for moss?

Tree Along the Greenway, 2020, Lauren Thomas

Can You Solve The *Muddy Mystery?*

Animal tracks are clues left behind in soil, mud, or snow that tell us about the area's wildlife. Rivers and creeks are often an animal's main source of water, so animal tracks are abundant in the soft mud along the Greenway.

What animal could this be?

Animal tracks, 2019, Josh Arrants

Clue #1: The animal tracks measure slightly more than 6" in length.
Clue #2: There are 5 long toes, and some of them are slightly curved.
Clue #3: There are little webbing connections on the tops of the toes.

These are great clues to figuring out what type of animal made the tracks and to solving our "Muddy Mystery."

It's the beaver! Beavers are found in freshwater ponds, lakes, rivers, marshes, and swamps. You might spot one while on your walk along the Greenway!

Beaver, 2020, Randy Hudson

(left) Deer track, 2020, Brittany Taylor-Driggers
(right) Deer, 2020, Josh Arrants

What other animal tracks do you see along the Greenway?

Natural and Manmade Water Systems

Natural water systems

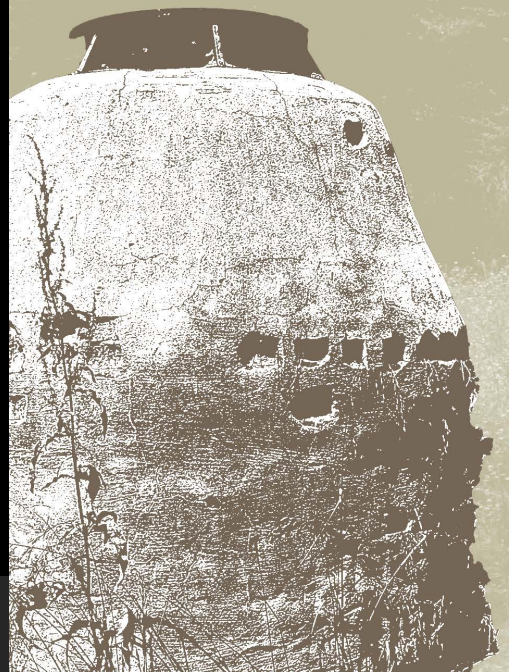
Undeveloped land along the banks of streams is called a riparian buffer and filters water running into the stream. Riparian buffers help reduce the sediment, phosphorus, and nitrates that flow into the waterway. The trees within the riparian buffer help to shade the stream, keeping temperatures down and sustaining native aquatic species.

Did you know that trees, shrubs, and wildflowers soak water with their roots?

Engineered Water Systems

Storm drains and bioswales are part of an engineered water management system, helping to drain excess rain from impervious surfaces like parking lots, roads, and rooftops. The drains receive storm water from street gutters and roof downspouts. They rapidly move water into underground pipes and culverts, which channels the water into the creeks and streams. After heavy rains, this can lead to flooding.

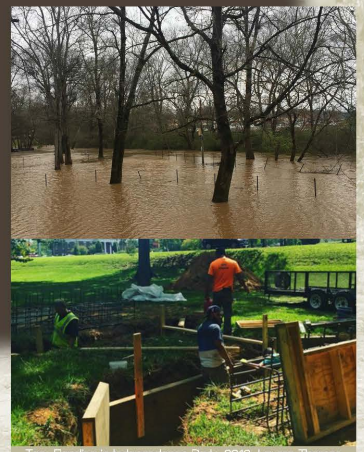
What does 'Impervious' mean?



This Trail is in a Floodplain

Every time it rains, water runs off impervious surfaces, collecting pollutants such as dirt, fertilizer, oil, garbage, and bacteria along the way. Sometimes water enters the watershed too quickly for the land to absorb and filter out the pollutants. It rushes into streams and creeks faster than waterways can accept it, and flooding occurs. The low lying land where the flooding occurs is called a floodplain.

Many communities intentionally develop walking paths in floodplains along their rivers, creeks, and streams. Floodplains are not suitable for residential or commercial development, but their delicate natural beauty makes them ideal for recreational trails and greenways.



Top: Flooding in Independence Park, 2019, Lauren Thomas
Bottom: Building a swale, 2019, Lauren Thomas

Birds along the Greenway
& where to find them

Be a Bird Watcher

Bird watching is a great way to begin noticing and listening to the intricate details of wildlife. Many nesting boxes have been placed along the trail to invite different kinds of birds to the Greenway. Some commonly known birds you may see are Blue Jays, Carolina Wren, American Robin, Barred Owl, Northern Cardinal, Prothonotary Warblers, Ruby Throated Hummingbird, and Downy Woodpecker.

How many nesting boxes can you spot?

The Bouncy Little King and Other Birds

The Golden-crowned Kinglet (Regulus satrapa) iis a bird species that thrives in cold weather. Weighing no more than a nickel, these birds are in constant motion. The only time they seem to sit still is to sleep! Bouncing, jumping, and flitting around tree branches, needles, and dead leaves, they energetically search for small invertebrates and seeds to eat.

(Top) Carolina Wren, 2020, Randy Hudson
(Bottom) Blue Bird, 2020, Randy Hudson

(Top) Belted Kingfisher (female), 2020, Randy Hudson
(Bottom) Red-Headed Woodpecker, 2020, Randy Hudson

(Top) Barred Owl, 2008, Bill Stokes
(Bottom) Prothonotary Warbler, 2020, Randy Hudson

(Top) Carolina Chickadee, 2020, Randy Hudson
(Bottom) Northern Cardinal, 2020, Randy Hudson

(Top) Nesting box, 2020, Lauren Thomas
(Bottom) Red-tailed Hawk, 2020, Josh Arrants

Top: Ruby crowned Kinglet, 2019, Josh Arrants
Bottom: Golden-crowned Kinglet, 2019, Josh Arrants

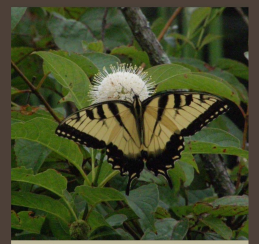
A Symphony of Birdsong

Take time to "tune in" to the local landscape. Even your backyard birds sing extraordinary songs! Some birdsong enthusiasts have created mnemonics to help them identify and match a bird with its song.

The Carolina Wren, SC's state bird, sings: *'germany, germany,'*
The Eastern Towhee sings: *"drink your teeeeea"*
The Carolina Chickadee sings: *'Chick-a-dee-dee-dee-dee-dee'*

Listen closely. What bird's song do you hear?

The Wetland Overlook



Tiger Swallowtail on a Button Bush, 2020, Bill Stokes

Managing Water Levels

Greenway engineers designed two constructed wetlands: the one you see here, and one underneath the nature pavilion. These engineered wetlands were designed to create storage for storm water in the floodplain, help control flooding, and reduce the amount of storm water released into the creek. By capturing the water that runs off from nearby streets, these constructed wetlands slow the rate of storm water flow and prevent sediment and pollutants from flowing into Gills Creek. The captured storm water will seep slowly into the ground and replenish the local supply of groundwater.

Supporting Biodiversity

Wetlands can support a variety of organisms, from microbes to mammals. The wetland areas create the right conditions to produce food sources for insects, crustaceans, small aquatic invertebrates, and small fish. These small species in turn become food sources for larger amphibians, birds, and mammals. The constructed wetlands can also protect ecosystems downstream by retaining and processing excess nitrogen, phosphorus, and sediments. The trees, grasses, flowers, and aquatic plants in the constructed wetlands are both habitat and a food source for the animals that live along the Greenway.

Can you spot an insect in the wetlands that might be food for another animal?

Rain Gardens

A rain garden is a depressed area in the landscape that temporarily collects rainwater from a roof, driveway or street, and allows it to soak into the ground. Planting a rain garden with native shrubs, grasses, and perennial flowers can be a beautiful way to reduce water runoff.

What makes a rain garden different from a traditional garden?

Turtle, 2020, Bill Stokes