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Deeply Rooted: The Story of Congaree National Park

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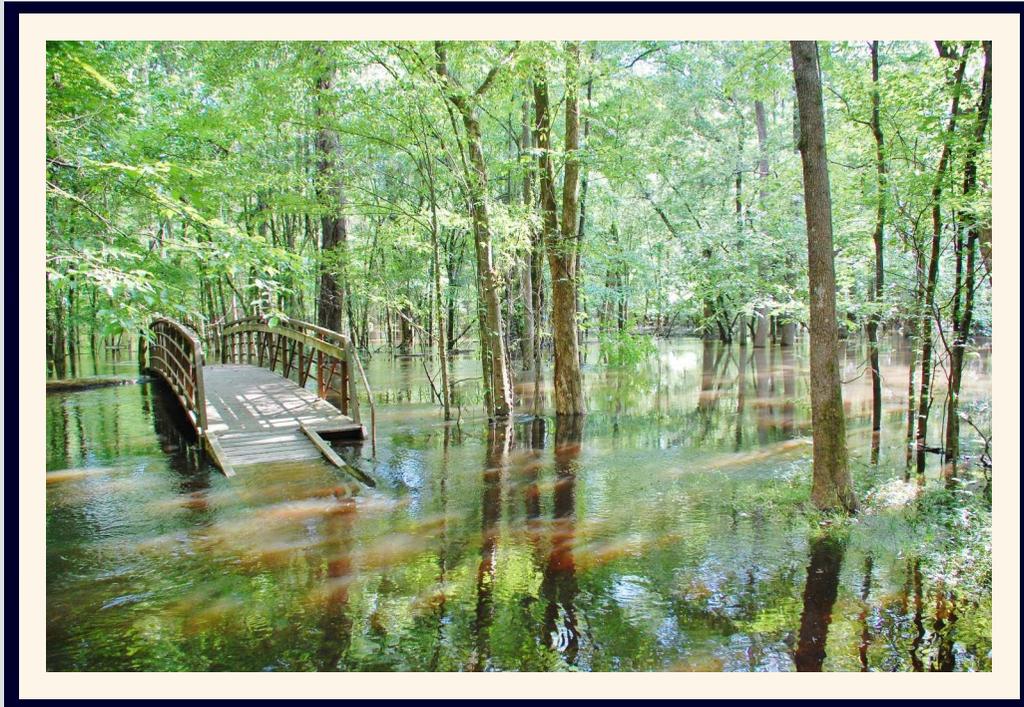
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Deeply Rooted: The Story of Congaree National Park



Authored and photographed by Taylor Karlin

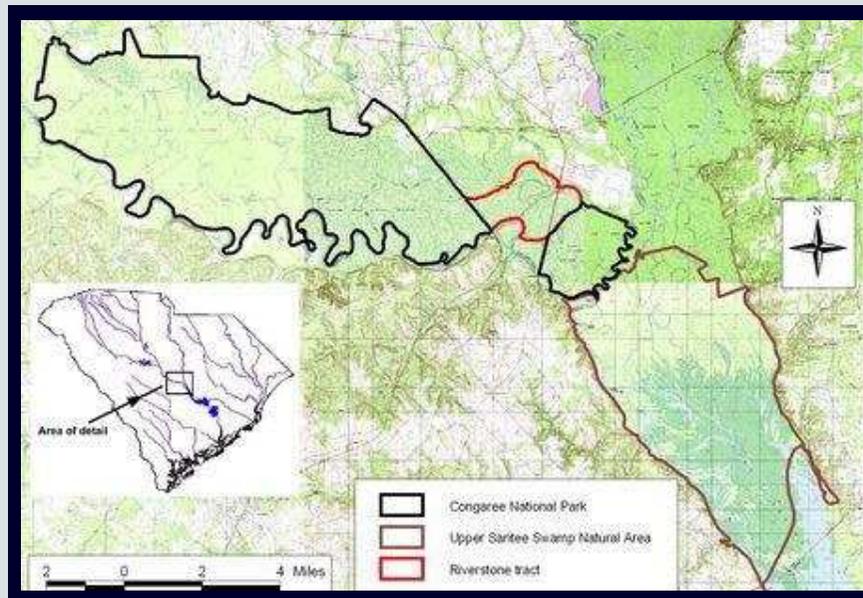
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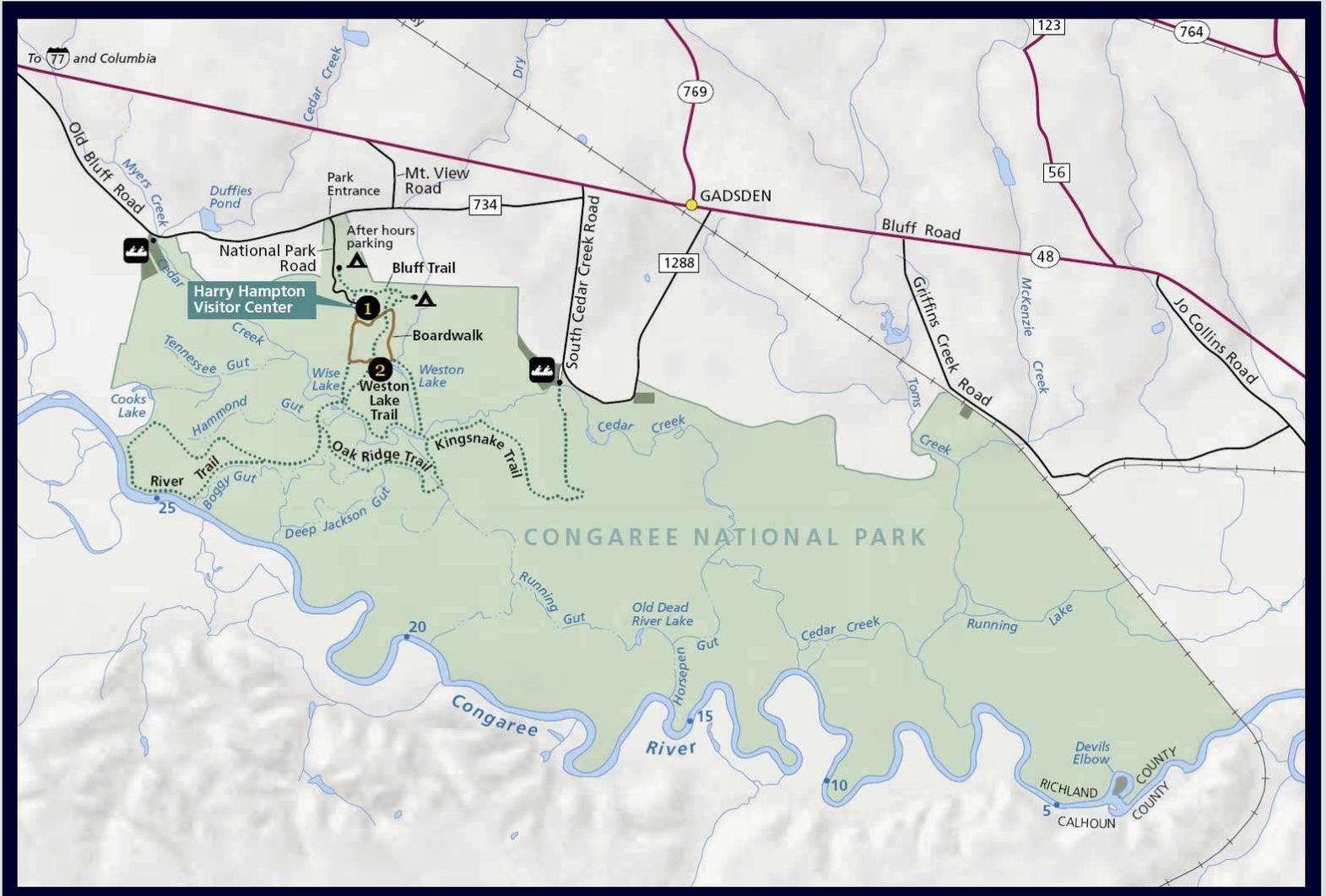
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The Park Itself

The Congaree National Park is a natural wonder amidst a cosmopolitan world. Located a mere 20 miles southeast of Columbia, the state capitol of South Carolina, the park encompasses approximately 27,000 acres of floodplain forest, lakes, and creeks. It is bordered to the South by the Congaree River, and to the East by the Wateree River, which also touches the Upper Santee Swamp Natural Area. Although the park extends 15 miles, there is a maximum elevation change of only 20 feet. There are also 21,700 acres that are protected under the National Wilderness Preservation System, a designation indicating that the land remains in pristine condition, untouched and untampered by humans. Due to its unique characteristics and the importance of the land, The Congaree National Park also has many other designations including Natural National Landmark, National Monument, International Biosphere Reserve, National Register of Historic Places, Ramsar Wetlands of International Importance, Outstanding National Resource Waters, and Globally Important Bird Area.



Map of Congaree National Park provided by Dan Tufford, Biology Department, University of South Carolina.



Map of Congaree National Park Provided by NPS



Weston Lake

Over 2,000 years ago, either the meandering Congaree River or Cedar Creek changed course, leaving behind Weston Lake. What once was a bend in the river, this oxbow lake is home to a variety of fish, freshwater turtles, and water snakes. Clay debris and organic sediment are gradually filling in the lake. Skirting Weston Lake is the Weston Lake Loop Trail, a 4.4 mile hike that runs alongside a large slough inhabited by cypress and tupelo trees. The trail follows the banks of Cedar Creek before connecting back to the Low Boardwalk.

Sims Trail and Bluff Trail

Due to their close proximity to the parking lot and visitor center, the Bluff Trail and Sims Trail are some of the most accessible, and therefore widely used trails. The upland Bluff Trail traverses a young forest of loblolly pines and mixed hardwoods, and provides access to both Longleaf Campground and Bluff Campground. The Sims Trail begins in the upland and continues on through bottomland floodplain. Abandoned liquor stills can be spotted alongside these trails.



Cedar Creek and Kingsnake Trail

As the largest floodplain channel, Cedar Creek is an important feature of the Congaree National Park. In 2006, a portion of the creek located below Wise Lake was designated as an Outstanding National Resource Water, an indication of high water quality and ecological importance. Although mostly located within the wilderness boundary, Cedar Creek has two canoe landings, one at Bannister Bridge Canoe Access and one at the Cedar Creek Canoe Access. This connects to the trailhead of the Kingsnake Trail, a 12 mile loop abundant with wildlife, birds, and cypress-tupelo sloughs.

Low and Elevated Boardwalk

Although connected in a 2.4 mile loop, the Low Boardwalk and Elevated Boardwalk pass through very different environments. The Elevated Boardwalk begins at the Hampton Visitor Center and passes through pine and hardwood forest. The Low Boardwalk traverses through swamp land inhabited by water tupelo and bald cypress trees. Along the Boardwalk Trail, visitors can enjoy a self-guided park tour highlighting several unique features of the land. Just stop by the visitor center to pick up an information pamphlet and take breaks at the corresponding numbered signs along the trail for your own private, self-paced tour of the park.



Congaree River, River Trail, and Bates Ferry Trail

Starting at the confluence of the Saluda River and Broad River at the Piedmont fall line in downtown Columbia, the Congaree River flows for 47 miles until combining with the Wateree River to form the Santee River. The Congaree River is responsible for the floodwaters that bring such great natural diversity to the land. Access to the river is provided via the River Trail, a 10 mile footpath lined by dense vegetation, as well as the Bates Ferry trailhead off of highway 601.

Historical Significance

The extensive history of the Congaree National Park can be traced back long before the United States even existed. Native Americans inhabited the Midlands for thousands of years prior to the Santee, Catawba, and Congaree tribes, who were displaced by violence and epidemic when European settlers made their way to America. Spanish conquistador Hernando de Soto was the first to explore the area in 1540, followed shortly by Juan Pardo, then by Englishman John Lawson in 1700. In the early 1700's, the Yemassee War broke out between the native tribes and colonists, resulting in eradication of the Congaree Indians and European settler acquisition of the land via land grants from the King of England. This continued until the Revolutionary War in 1776, when the state of South Carolina took over the right to distribute land to private owners. James Hopkins Adams became governor of South Carolina in 1839 and acquired ownership of a majority of the Congaree swamp. After the Civil War, Adams sold the land to individual owners, dividing it into several tracts. A large portion of low lying floodplain near rivers, constituting almost 15,000 acres, was bought by Francis Beidler, the owner of the Santee River Lumber Company. This area is still known today as the Beidler tract. The Santee River Lumber Company began logging bald cypress trees in 1899 and continued for over 15 years. However, the company had difficulty gaining access to inland forest and transporting the timber, in part because healthy trees would become waterlogged and could not be floated down river to sawmills. Sunken trees still remain at the bottom of creeks and washed up in flats. The company lost money and temporarily ceased operation in 1915, leaving most of the old growth hardwood and floodplain untouched. Shortly after World War II, E.R. Poat leased wild turkey and duck hunting rights on the Beidler Tract and established the United States Game Club. The lease was taken over by Marion Burnside, who renamed the organization as the Cedar Creek Hunt Club. By the early 1950s, the importance of the land was recognized by local activists, including Harry Hampton, who lead a grassroots publicity campaign to promote preservation of the land from logging and exploitation.



Small dike near Bates Ferry Trail

Around this time, Harry Hampton and state Senator James Hammond formed the Central Committee of the Beidler Forest Preservation Association to advocate for public ownership of the tract. Although the initial efforts failed due to refusal of the Beidler family to sell their land, a temporary revamp of logging in 1969 due to a spike in timber prices motivated other activists, including Jim Elder and Brion Blackwelder, to get involved through the creation of the Congaree Swamp National Preserve Association. Senator Strom Thurmond and Senator Ernest Hollings introduced the bill to Congress, and on October 18, 1976, President Gerald Ford signed legislation to designate the Congaree Swamp National Monument. Then finally, on November 10, 2003, the Congaree National Park was established as the 57th national park.

Cultural Significance



Bates Ferry Bridge

The land that constitutes the Congaree National Park is rich in cultural tradition and diverse ancestral heritage. It is associated with many different groups of people, including Native Americans, African American, European settlers, and plantation owners. Families with longstanding ties to the area utilized the land through farming, boating, logging, and hunting. Over thousands of years, various human activities have impacted the Congaree swamp. Native Americans constructed ceremonial mounds throughout the floodplain. European settlers, plantation owners, and farmers

cleared land along rivers for cultivation and pasture land, much of which was developed by slaves prior to the Civil War. Escaped slaves formed independent communities, known as maroon settlements, that were hidden along the dense forest floor of the Congaree and Wateree River floodplains. As an attempt to maximize land use and make it more suitable for planting and grazing, landowners built dikes, levees, and earthen mounds called "cattle mounts" in the floodplain to grow crops and keep livestock safe from flooding. Colonists also began using privately owned ferries in the 1740s to cross the Congaree River in order to establish a route connecting Camden to Charleston. In 1766, John McCord's Ferry opened along the Bates Old River as the first government regulated public ferry. However, due to flooding and changes in the Congaree River channel it was supplemented upstream by the Bates Ferry. By the early 1900s, establishment of a railroad line and highways between Charleston and Columbia resulted in a decline in the use of ferries, as it provided cheaper, and more efficient transportation via automobile and train. Remnants of these historical roads and bridges can still be found, including Bates Ferry Bridge at the end of the Bates Ferry Trail. Furthermore, many of the earthen modifications remain largely intact, and several structures are listed in the National Register of Historic Places in 1996, including embankments, bridge abutments, and cattle mounts, like the well-known Cooners mount.

Natural Significance

The Congaree National Park constitutes the largest remaining expanse of old-growth bottomland hardwood forest in the United States, covering over 11,000 acres. The long growing season and rich soil of the floodplain swamp land yields incredible biodiversity among unique species of trees. As a very tall temperate forest, the Congaree has a canopy reaching upwards of 130 feet in some areas, and is home to 25 state and national champion trees. Champion trees are characterized as the largest of its species, according to a standard formula by the American Forestry Association that cumulates circumference, height, and average crown spread. The land provides ideal conditions for growth of large trees due to little human disturbance maintaining natural old growth, as well as, a long and warm growing season. Furthermore, periodic flooding from the Congaree and Wateree Rivers provides the land with an influx of nutrients and sediment that increases the fertility of the land and sustains biodiversity. Approximately 80% of the park is part of the Congaree River floodplain, which overruns its banks most commonly during winter months. The floodwaters are managed by small creeks called guts, which function to control the influx and outflow of water by filling during periods of heavy rain and receding during the dry months. They also act to replenish the floodplain with nutrients by depositing silt and soil carried by the water. The larger guts include Boggy Gut, Running Gut, Deep Jackson Gut, and Hammond Gut, which flows into Cedar Creek. Even the ground itself is important to the health of the floodplain, as it functions to filter water by trapping and detoxifying harmful pollutants. In some parts of the floodplain, the forest floor is made up of Dorovan muck, an 8 feet thick muddy mixture of clay and old leaf debris.



Gut near Bates Ferry Trail



Water tupelo growing in Cedar Creek



Congaree River at Bates Ferry Trail



Sims Trail in northern upland

The diverse topography of the Congaree National Park maintains exceptional biodiversity by providing terrestrial and aquatic habitats for numerous species of reptiles, amphibians, insects, and spiders, as well as resting and breeding habitats for Neotropical migratory songbirds. In addition to amazing variation in fauna, an abundance of flora can be found throughout the Congaree Swamp. The upland portion of the park is characterized as elevated bluffs and young pine forests, consisting of loblolly pines, beech, oak, sweetgum, and paw-paw. The bottomland floodplain forest is riddled with oxbow lakes, formed from bends in rivers that change course and leave behind bodies of water, and deep-water sloughs, which are deep bodies of slow moving water. Common native trees found in the lowland floodplain areas include bottomland hardwoods, water tupelo, and bald cypress, and a forest floor dominated by switch cane. These species have shallow root systems that make them more susceptible to damage in harsh conditions. As a result the Congaree swamp was devastated in 1989 when Hurricane Hugo tore through the Carolinas, uprooting many champion bottomland hardwoods, but leaving cypress and water tupelo relatively unscathed.



Bald Cypress "Knees"



Slough near Low Boardwalk



Annual flooding of Cedar Creek



Weston Lake oxbow lake

The land of the Congaree National Park is designated and protected under the Wilderness Act of 1962. This indicates that the land remains naturally sustained, undeveloped, untrammeled, and preserved in a primitive state. However, conditions within the Congaree National Park have been impacted by the massive growth of nearby urban centers. Upstream land development and infrastructure along both the Congaree River watershed and the watersheds of streams entering the park has caused major water quality concerns for the park, including changes in hydrology of the major creeks and rivers. Furthermore, water pollution has worsened with the increase of sediment run-off from extensive development in the surrounding areas. Degradation of waterways has resulted in altered flow rates and poor quality surface water. Although many sources contribute to increased pollution, construction on the US highway 601 causeway, building of the railway, and water use for industry, agriculture, and municipal purposes have been specifically detrimental.

Nature Guide



Native Animal Species

An abundance of animals call the Congaree National Park home. Common mammals include white-tailed deer, wild turkeys, Virginia opossum, gray squirrel, and raccoon. The area is also well known for its variety in amphibian, reptilian, and insect life. It is unlikely that for a visitor to leave the park without spotting frogs, slugs, butterflies, skinks, freshwater turtles, and unique spiders. Snakes are also largely found, including cottonmouth, copperhead, water snakes, kingsnake, black rat snake, and black racer. Birding has become a very popular activity due to the impressive population of migratory birds that make their way to the Congaree.



Broadheaded Skink
Eumeces laticeps



Pine Warbler
Setophaga pinus
(provided by Friends of
Congaree Swamp)



Red-bellied woodpecker
Melanerpes carolinus
(provided by Friends of
Congaree Swamp)



Summer tanager
Piranga rubra
(provided by Friends of
Congaree Swamp)



Yellow-bellied turtle
Trachemys scripta
(provided by Friends of
Congaree Swamp)



Barred Owl
Strix varia
(provided by Friends of
Congaree Swamp)



Cottonmouth
Agkistrodon piscivorus
(provided by NPS)



Golden Orbweaver
Nephila clavipes
(provided by NPS)

Native Plant Species

The Congaree National Park is home to 27 distinct plant communities. Of these, 22 are located in the wetlands and the remaining 5 are found in the elevated bluffs. The lowland species include water tupelo, bald cypress, paw paw, and dwarf palmetto. American beech growth is limited to the elevated bluffs. Species such as loblolly pine, swamp laurel oak, and sweetgum can be found in both elevated and lowland regions of the park.



American Beech

Fagus grandifolia

Easily identified by smooth, grayish bark; Native Americans and early settlers ground beech nuts into flour



Bald Cypress

Taxodium distichum

Cone-shaped "knees" rise from the ground and function as part of the root system for aeration and anchorage of the tree to the floodplain floor; Wood is rot and water resistant, earning the name "wood eternal"



Water Tupelo

Nyssa aquatica

Easily identified by buttressed trunks; Grow in aquatic water-rich environments; Moss on the lower part of the trunk indicates flood water levels.



Dwarf Palmetto

Sabal minor

Survive harsh conditions; Relative of the well-known cabbage palmetto, the state tree of SC



Loblolly Pine

Pinus taeda

Can grow in wetland areas, unlike most other species of pines; Loblollies are the tallest trees in SC



Laurel Oak

Quercus laurifolia

More tolerant of wetter regions compared to other oak species; Believed to be a hybrid of willow oak and water oak (provided by Friends of Congaree Swamp)



Sweetgum

Liquidambar styraciflua

Easily identified by 5 pointed star-shaped leaves; Produce spiky, woody fruit called gumballs (provided by J.S. Peterson, hosted by the USDA-NRCS PLANTS Database)



Paw Paw

Asimina triloba

Named after the edible fruit produced by the trees (provided by Friends of Congaree Swamp)

Invasive Species

The spread of non-native, or invasive, species is a problem not limited to the Congaree National Park, as many parts of the world experience the overwhelming effects of exotic species. Once introduced, invasives can grow and spread rapidly. This is most likely due to the lack of natural predators to keep the populations in check. Furthermore, the species are often times highly aggressive and occupy a rather broad ecological niche. Because the non-native species, they often prevent natives from having access to vital resources, including space, sunlight, water, and nutrients. This can be a tremendous burden to the biodiversity of an ecosystem. Once exotic species are introduced to a new community, it is very difficult to control their population without the addition of non-native predator species. The best solution is to simply prevent the introduction of invasive species to an ecosystem where they do not belong. An introduced species causing major concern to the Congaree National Park is the presence of feral hogs. They have been very problematic to the park because their rooting behavior causes ecosystem degradation through bank erosion and interference with plant regeneration.



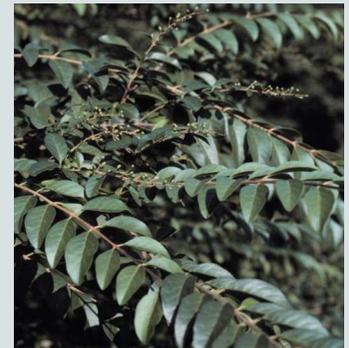
Feral hogs
Sus scrofa
(provided by Friends of
Congaree Swamp)



Beefsteak
Perilla frutescens
(provided by Nancy
Magnusson)



Japanese Stilt Grass
Microstegium vimineum
(provided by NPS)



Chinese Privet
Ligustrum sinense
(provided by Larry Allain,
hosted by the USDA-NRCS
PLANTS Database)

Management



The Congaree National Park abides by the following purpose statement: “The Congaree National Park protects, studies, and interprets the resources, history, stories, and wilderness character of the nation’s largest remaining tract of southern old-growth bottomland forest and its associated ecosystems.” Under management of the National Park Service, the goal is preservation to provide solitude and recreation to the public, giving rangers the responsibility to maintain the parkland so that it is accessible for utilization. Their duties include, but are not limited to, foot trail clearing, cedar creek canoe trail clearing, non-native plant removal, and prescribed fire maintenance, which prevents wildfire and preserves red-cockaded woodpecker habitat. Furthermore, feral hog management is required to prevent the ecosystem degradation, bank erosion, and interference with plant regeneration, caused by their rooting behavior. Areas subjected to intensive NPS management, such as the clearing of fallen trees in Cedar Creek, are not included as part of the wilderness.

The Harry Hampton Visitor Center provides extensive information on the history, culture, and natural characteristics of the Congaree National Park. Trail maps and self-guided hike brochures can be obtained here, or stop in to get questions answered by the National Park Service rangers. In 2001 the visitor center was dedicated to Harry Hampton, the initial activist to fight for preservation of the land. His grassroots campaign for protection from logging and exploitation began in the early 1950’s when he introduced the importance of the Congaree swamp with his “Woods and Waters” columns in South Carolina’s main newspaper, “The State.”

How To Get Involved

Volunteers play a huge role in the function of the Congaree National Park. All efforts, whether consistent, occasional, long-term, or temporary, are appreciated by the NPS rangers. Opportunities are available for regular, active involvement through a program called Volunteers in Parks. Maintenance Volunteer and Visitor Services positions have duties include working with rangers for footpath and canoe trail maintenance, as well as leading guided interpretive tours and assisting in the visitor center. Those looking to lend a helping hand when time permits can take part in special scheduled activities throughout the year. Butterfly counts, Swampfest, and activities with local schools are a few examples. Social media presence is also highly valued as a method of promoting the Congaree National Park and influencing public involvement.



Recreational Activities

Fishing



Turn-off for the Cedar Creek Canoe Access

Fishing is permitted throughout the Congaree National Park with requirement of a valid South Carolina fishing license. The only exception is the Weston Lake overlook, where fishing is not-permitted off of the overlook nor 50 feet to each side. Catch and release fishing is highly encouraged to maintain the fish population and biodiversity in the park. It is also preferred that the use of non-game fish, minnows, and fish eggs as bait is avoided in order to prevent the introduction of non-native species.



Kingsnake Trail near Cedar Creek

Hiking and Birding

Visitors of the Congaree National Park can take advantage of 20 miles of distinct trail reaches, including Sims, Bluff, Low and Elevated Boardwalks, River, Kingsnake, Weston, and Bates Old River. Through a program called Walks and Talks, park rangers and volunteers lead guided hikes intended to educate visitors on the Congaree National Park, while walking through its natural beauty.

The National Park Service encourages all visitors to become involved in wildlife management and monitoring, and thus offers the opportunity to log all wildlife sightings in a log book displayed in the visitors center. Visitors can catalog the location, species, and distinct characteristics or observations. Birding is another very popular activity at the Congaree, as the park is home to many species of Neotropical migratory songbirds.

Camping

The Congaree National Park offers both front and backcountry camping, with two designated front country campgrounds. Fires are allowed only at Longleaf and Bluff Campgrounds, but all firewood must be picked from already dead, fallen logs, or purchased locally, in order to prevent the spread of disease and invasive species. Registration for all campgrounds can be completed at the Longleaf Campground. Although there are no designated backcountry campgrounds, a state issued permit is required for camping in the backcountry. Visitors must also camp at least 100 feet away from water sources, including Cedar Creek, Tom's Creek, Wise Lake, and Bates Old River.



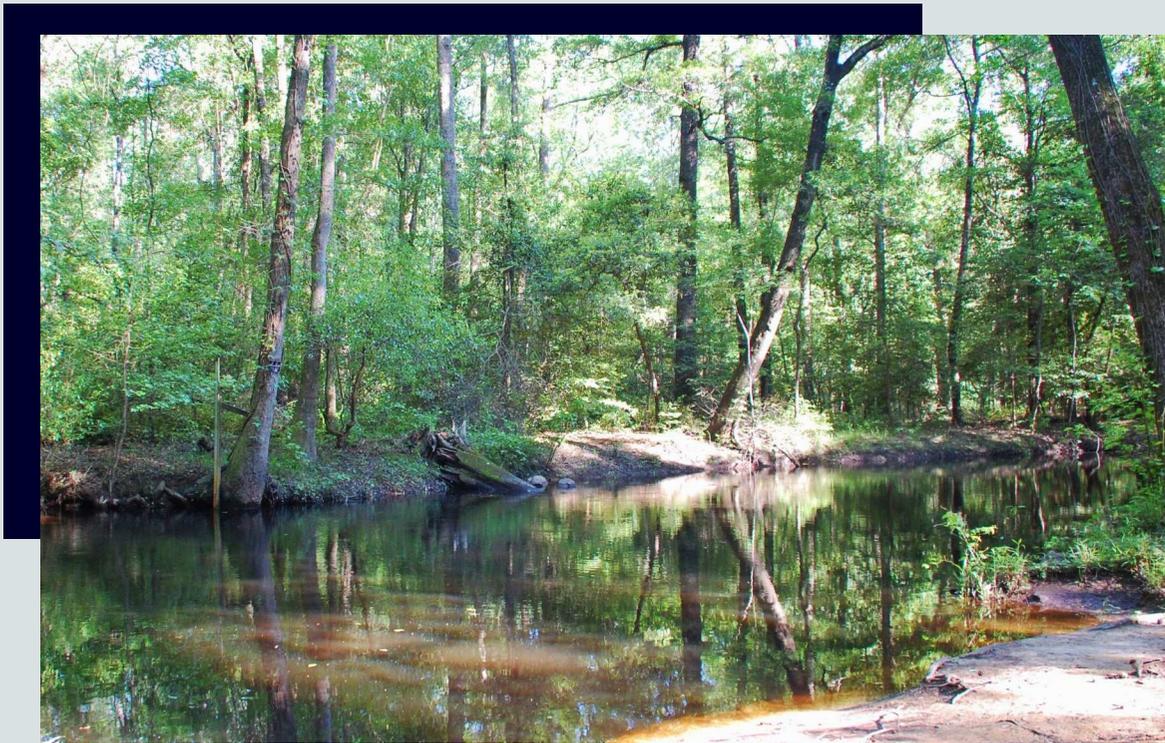
Longleaf Campground



Cedar Creek canoe landing

Canoeing and Kayaking

The abundance of creeks and rivers in the Congaree National Park, provides the ideal playground for individuals interested in canoeing and kayaking. Whether spending a few hours paddling the creek, or taking off on an overnight backcountry excursion, there is something for everyone. The 15 mile long Cedar Creek Canoe Trail is a unique way to enjoy the natural beauty of the Congaree wilderness. This marked trail begins at Bannister's Bridge and runs all the way to the Congaree River. Before setting out on a canoe trip, it is important to check the water levels and conditions, as the park is characteristic of flooding. Cedar Creek water levels can fluctuate by 10 feet, sometimes covering the trail markers, and introducing unpredictable water that can be difficult to navigate. Although park staff continually clears the Cedar Creek Canoe Trail of fallen trees and debris, sometimes coming across downed trees and log jams can be an unexpected challenge.



Cedar Creek canoe landing at Bannister Bridge



Congaree River at Bates Ferry Trail

If the Cedar Creek Canoe Trail is not enough, the Congaree River Blue Trail is a paddling trail that starts upriver in Columbia and flows 50 miles down the Congaree River until reaching the Congaree National Park. Paddlers cross the fall line into the Coastal Plain, where they experience a meandering river interrupted by sandbars before reaching the park. Detailed information can be accessed online through American Rivers website, including maps outlining landings, backcountry trail access, highlighted sites to stop and explore, overnight camping guidelines, and safety tips.

For those that are new to the Congaree National Park, or to canoeing, the Hampton Visitor Center offers free guided canoe tours, led by park rangers. Although limited throughout the year, these tours serve as a unique way to hear about the natural and cultural significance of the park, see the abundance of wildlife, and enjoy a leisurely paddle down Cedar Creek.

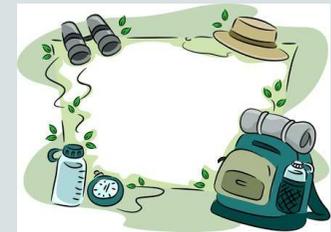
Leave No Trace!



Each year the Congaree National Park receives over 100,000 visitors attracted to the many activities the park has to offer. However, with such heavy use on the land, tourists can have a large impact on the natural ecosystems. It is important to keep in mind the friability of the environment and the effects our presence can have on the land, vegetation, and wildlife. Leave No Trace is a simple guideline to follow in order to reduce our impact on the land and enjoy the many wonderful aspects of nature in a responsible and sustainable manner.

Plan Ahead and Prepare

- Be prepared for bad weather and emergencies
- Use a map and/or compass
- Visit in small groups to limit impact



Travel and Camp on Durable Surfaces

- Established trails and campgrounds, rock, dry ground
- To protect riparian areas, camp at least 200 feet from bodies of water, including lakes, rivers, and streams

Dispose of Waste Properly

- Pack it in, pack it out: all trash, leftover food, toilet paper, hygiene products
- Wash dishes and/or yourself 200 feet from water source using small amount of biodegradable soap



Leave What You Find

Observe, but do not move or displace natural objects
Important to avoid the introduction or transportation of
non-native invasive species

Minimize Campfire Impacts

If fires are permitted, use an established fire ring, fire
pan, or fire mound
Keep fires small and completely extinguish when done
Use sticks and dead wood from surrounding area, but
do not damage live trees



Respect Wildlife

Observe from a distance and do not disturb wildlife,
especially during mating, nesting, hibernation, or
with young
Feeding wildlife is not acceptable, as it can damage
their health and alter their natural behavior



Be Considerate of Other Visitors

Respect other visitors, be courteous, avoid loud noises

I would like to thank the following individuals and organizations for their support in the completion of this South Carolina Honors College senior thesis.

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