



Friends of Congaree Swamp News

Save the date

Christmas Bird Count

This year's Christmas Bird Count will be held **Sunday, Dec. 17.**

Christmas Bird Counts, conducted each year since 1900, are the oldest citizen science project in the country. The CBC is an all-day effort to find and identify as many wild birds as possible within a 15-mile diameter circle.

This effort, which now includes over 2,500 circles and more than 70,000 participants annually, is sponsored by the National Audubon Society and results may be reviewed at www.audubon.org/conservation/science/christmas-bird-count.

The Congaree Swamp CBC (founded by Robin Carter) includes almost all the national park and adjacent areas, from Gadsden in Richland County to Fort Motte and St. Matthews

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Revocation of Clean Water Rule a big concern

The Environmental Protection Agency and U.S. Army Corps of Engineers recently released a public notice to revoke the Clean Water Rule drafted by the Obama Administration in 2015.

This would be the first step in a two-step process to replace the proposed definition of waters of the United States (or jurisdictional waters) in the 2015 rule, which has never been fully enforced, with a new definition. The new definition ostensibly would mirror the definition of U.S. waters that had been in place prior to 2015, but would actually adhere to a narrow interpretation of that earlier rule.

If the redefinition is eventually approved, some waters and wetlands previously protected under the Clean Water Rule would be administered on a state-by-state basis, which will surely result in weaker protection for many states' waters and wetlands.

Friends of Congaree Swamp prepared public comments strongly objecting to the revocation of the 2015 Clean Water Rule, since it

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Pharmaceuticals, organic waste already a problem in park waters

Results of a recent study on levels of organic pollutants in Congaree National Park's waters and sediments indicate pharmaceuticals and organic waste indicators were common.

The park was particularly interested in the variety of pharmaceuticals, organic waste indicators and synthetic hormones that are not usually measured in typical water quality analyses. In addition to learning about these pollutants in their own right,

many of these pollutants are known to affect and disrupt aquatic communities.

The study was conducted from 2013 to 2015 at 16 study sites around the park, focusing on entry points of waterways into the park, as well as interior sites including Cedar Creek, Weston Lake, Wise Lake and isolated wetlands. The park hoped to learn about pollutants entering the park, presumably from major upstream point

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President's Corner

Dr. John Grego

NEEF grant

We received the good news that our \$2000 Every Day Event grant application to NEEF (National Environmental Education Foundation) was one of only 25 applications nationwide that was approved for funding.

These grants are available to advocacy groups



for federal lands and we chose to apply after consulting with park staff about an appropriate project. As it turns out, the park had been working with Ms. Carrie Sinkler-Parker through a National Park Foundation grant to support the park service's Every Kid in a Park program, and our grant proposal could complement their work through that grant.

You may have seen Carrie Sinkler-Parker featured in *The Free Times'* 2017 Earth Day issue spotlighting Congaree National Park. Ms. Sinkler-Parker, working with the National Council of Negro Women, has spent the past couple years arranging opportunities for elementary school children in Title One schools from Sumter, Clarendon and Williamsburg counties to provide educational programs. Though many of these students grow up near bottomland hardwood forests, they have never experienced them.

Education efforts so far have included remote

programs at local libraries and 10 field trips to Congaree National Park to provide teachers and students with programming consistent with grade-level South Carolina standards for science and social studies. Students also participate in the Junior Ranger program and experience typical park interpretive activities, including a visit to the park's visitor center displays and a guided hike. The program helps the park by expand its outreach to the Pee Dee area, increasing its regional visibility.

Ms. Sinkler-Parker plans to expand the program this year to 25 field trips. She has received in-kind contributions and has applied for additional grant funding. Friends of Congaree Swamp's grant will help fund transportation and meals for the students for some of these trips. Our funded field trips are scheduled for December and we plan to feature photographs from those trips in our next newsletter.

Feral hog control support

Congaree National Park and U.S. Department of Agriculture's Animal and Plant Health Inspection Service have a three-year interagency agreement for an integrated feral hog management program that has supported a feral hog specialist, Jake Beechler, for the past two years.

Funding is uncertain from year to year, and Friends of Congaree Swamp has helped to support the program each of the first two years of the agreement. We have detailed our efforts to support feral hog control in previous newsletters, whether through direct financial support or through thorough review of the park's feral hog management plans.

In the two years since the program was initiated, Beechler has provided monthly reports on his hunting and outreach activities. In general, corral traps are placed throughout the park, and monitored via remote game cameras with the intent of capturing entire herds (sounders) of feral hogs. Remote cameras are also used to document hog activity along the park's trails, with periodic closures for night hunting.

USDA and Congaree National Park sponsored a November 2016 feral hog workshop, and also attend conservation district meetings and COWASEE Basin task force meetings for periodic

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Friends of Congaree Swamp advocates for Congaree National Park and its unique environment.

Dr. John Grego, President

Sharon H. Kelly, Editor

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Aquatic critters hike

Hikers encounter surprise adventures

Our aquatic critters hike to Dry Branch on Oct. 15 proved to be a fruitful adventure.

Dr. Jim Bulak of the S.C. Department of Natural Resources Freshwater Fisheries Research Lab led the hike accompanied by Justin Lewandowski of the S.C. Department of Health and Environmental Control, a specialist in macroinvertebrate species.

Our short cross-country hike to Dry Branch was more of an adventure than anticipated. The sweet gum has grown back with a vengeance after our wet spring and early summer. It appears that the dam on

Dry Branch Hunt Club is being repaired after failing during the October 2015 floods, and the repairs have reduced the flow of Dry Branch. In addition, the stream was colored orange by a harmless algae, so initial prospects for electrofishing the stream did not look promising. It took Jim a little while to fine-tune his equipment for the challenging conditions.

Regardless, Jim had projected we would net 10-12 fish species, and that was right on the nose with our 11 fish species total. In addition, Justin used a variety of nets to tease out several macroinvertebrates, including predaceous diving

beetles and beautiful dragonfly and damselfly nymphs. It's a wonderful experience to have Jim and Justin work their way through the buckets and share life histories for each of the species before returning all specimens to the stream.

We took a slightly longer, but much easier route back, and capped the day with a visit to a substantial still site. We plan another trip in the spring to Tom's Creek, which has a completely different aquatic community from most of the streams entering the park.

Jim had applied for a park research permit for this and future hikes, and the species list

below has been shared with the park's Resource Management staff.

Flier-3
Bluegill-1
Margined Madtom-1
Mosquitofish-2
Warmouth-3
Dollar Sunfish-6
Redfin Pickerel-1
Yellow Bullhead-2
Pirate Perch-5
Creek Chubsucker-3
Golden Shiner-1
Salamander species-1
Spring Peeper-1
Tadpole species-1
Aquatic snails (Campeloma genus)-5
Whirligig Beetle (Gyrinidae family)-50



Dollar Sunfish

Midge (Chironomidae family)-2
Water Boatmen (Corixidae family)-12
Predaceous diving beetle (Dytiscidae family)-2 species)-2
Predaceous diving beetle (Neoporis genus)-1
Caddisfly (Hydropsychidae family)-4
Water mites (Hydrachnidiae)-1
Narrow-winged Damselfly nymph (Coenagrionidae family)-2
Broad-winged Damselfly nymph (Calopterygidae family)-1
Amphipods-2
Clubtail dragonfly nymph (Gomphidae family)-3
Cruiser dragonfly nymph (Macromiidae family)-1
Water strider (Gerridae family)-5



Broad-winged damselfly nymph



Dr. Jim Bulak electrofishing in Dry Branch

Fall delivers beautiful day for annual meeting

The 2017 annual meeting took place at the historic Harriet Barber House during a brisk fall day—downright chilly in the afternoon, though mellowing later in the day with beautiful evening light. After registration, Friends members either visited Carolina Bay Farms or Goodwyn Cemetery.

Carolina Bay Farms, just up the road from the Harriet Barber House, is owned by James Hopkins Helms and Sharon Ray. The farm raises heritage breeds of hogs, chickens, turkey and ducks, makes cane and sorghum syrup and sells goat milk and chicken eggs. Members took a short walk to the eponymous bay, Mistletoe Bay, featuring a view of open water.

The trip to the historic African-American cemetery was led by Michael Robinson, whose grandmother was the last burial at the cemetery. The cemetery, containing 170 marked and unmarked graves, is believed to be associated with nearby St. John Baptist Church. The cemetery was surveyed by Chicora Foundation in 2011, whose report updated much of what we now know about the site.

Everyone reconvened back at the Harriet Barber House for our business meeting and a book-signing organized by USC Press, featuring Mark Kinzer's new book, *Nature's Return*. We thanked our Southeast Rural Community Outreach hosts, recognized our Congaree

National Park guests, and re-elected board nominees Marie Adams, LaBruce Alexander, Carolyn Hudson, Carol Kososki, Erich Miarka and Lynn Teague to three-year terms.

We next honored our Order of the Cypress winner, Marie Barber Adams. Marie's family is the only family in Richland County that originally purchased property through the S.C. Land Commission during Reconstruction and maintained ownership of their land through the present day. Family members have played a prominent role in both the education and faith communities in Lower Richland. Marie, with other members of SERCO, including sisters Mary Barber Kirkland and Carrie Barber White, have organized numerous events promoting heritage tourism for more than 15 years. SERCO co-hosts SwampFest! every year with Congaree National Park, an event that has promoted much good will between the park and Lower Richland. In her role as board chair, Marie represents SERCO at numerous initiatives hosted by the county, the University



Marie Barber Adams accepts the 2017 Order of the Cypress

of South Carolina and Congaree National Park to promote greater cooperation on tourism and development issues in Lower Richland.

After the business meeting, we settled down to a feast of roast oysters and chili prepared by Billy Mote, local beers, roast chicken, fish stew, roast vegetables and pot luck desserts.

We would like to thank our volunteers who assisted with set-up, registration, beverages, food, and clean-up; they set a record for the fastest, most thorough breakdown we've ever seen. Volunteers were James Barber, Mary Bull, Blaney Coskrey, Andy Fiffick, Carol Gist, Emily Grego, Rhonda Grego, Pam Neal, Dennis Poole, Jean Prothro, Clover Robichaud, Lynn Teague, and Angela Valvasori. And anyone else we overlooked.

Clean water

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represents a significant step toward weakening protections for waters that affect Congaree National Park and other important waters and wetlands throughout the United States. The 2015 Clean Water Rule was put in place to clarify the definition of U.S. waters after a pair of Supreme Court decisions limited the scope of traditional interpretation. The 2015 Clean Water Rule was developed over many years, with more than 400 stakeholder meetings held, and an extensive scholarly review supervised by a scientific advisory board.

All rules protect “navigable waters” and exempt many agricultural and water treatment activities. The 2015 rule provided clear definitions of other jurisdictional waters, and would greatly reduce the numerous contested cases that resulted from the Supreme Court decisions.

It particularly created clarity over tributaries, including headwaters streams, and adjacent jurisdictional waters; i.e., those with a “significant nexus” or connection to waters that everyone agrees should be protected.

Several such streams drain directly into Congaree National Park’s wetlands and waters, and most of these are impaired. Their protection under the Clean Water Act has been critical to efforts to regulate pollution affecting these waters and consequently Congaree National Park.

“Case specific” waters, which fall outside the above definitions and are often the focus of litigation, would be a much smaller class.

The 2015 rule also provides protection to waters within the 100-year floodplain as adjacent waters, provided they are within 1500 feet of the ordinary high water mark of the river; waters within 4000 feet of the ordinary high water mark can either be considered on a case-specific basis or treated as a “similarly situated” class. As we understand it, the ordinary high water mark would be confined largely to the edge of a river channel, rather than its floodplain, so even the 2015 rule does not provide sufficient protection to large river systems with wide floodplains. For example, the Congaree River floodplain is four miles wide, so floodplain waters upstream of the park would have some protection, but waters far from the channel would not be protected.

The park is heavily affected by management of the Congaree River’s floodplain, since the park is 25 miles downstream from Columbia, a large metropolitan area with well-documented water quality problems related to urbanization, non-point source pollution and publicly and privately owned wastewater systems with long histories of violations. The floodplain needs greater protection than allowed by the 2015 Clean Water Rule, not less.

The 2015 Clean Water Rule allows Carolina bays to be

evaluated as a special class provided they are “similarly situated” waters; i.e., serving a similar function with respect to maintaining the physical, chemical or biological integrity of nearby waters. There are several Carolina bays near the park that meet this criterion, as they filter groundwater to the park, help recharge the park’s groundwater, and mitigate and filter surface water overflow to the park in times of flooding.

We believe that many of the waters that affect the park will lose protection under the proposed revocation and replacement of the 2015 Clean Water Rule.

The careful science that supports this rule and a compelling interest in preserving our country’s waters and wetlands argues against revoking the rule. Many national environmental organizations will actively oppose the actions taken by the Environmental Protection Agency and the Corps of Engineers and we plan to remain active in the process.

Pollutants

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sources such as the City of Columbia Waste Water Treatment Plant or non-point sources such as agricultural run-off. In addition, the park included interior sites to help identify pollutants likely caused by visitor impacts.

When such studies are conducted, a wide variety of pollutants are typically found. Waste water facilities simply

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Pollutants

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do not treat for many of these compounds and they are readily introduced into waterways. While pharmaceuticals and organic waste indicators were common in water samples at the park, synthetic hormones were detected in only a couple samples.

Pharmaceuticals. Forty-nine of 107 tested pharmaceuticals were found in samples from the park's waters. The antidiabetic drug metformin was detected at least once in every sampling site, and found in 61 percent of all samples. This is consistent with tests nationwide. Anti-seizure medications, analgesics, antihistamines and muscle relaxants were also frequently found—a real medicine cabinet's worth of prescriptions. The highest concentrations of drugs included caffeine, though

the single highest measurement was for tramadol, an opiate-derivative analgesic, at Wise Lake, a popular fishing spot.

The greatest variety of pharmaceuticals were found along the major rivers bounding the park: the Congaree River at the park's western boundary; the Congaree River at the US 601 bridge; the Wateree River; and Horseshoe Lake, which lies close to the Wateree River and is in the frequently-flooded junction of the Wateree and Congaree.

Concentrations of organic compounds are a concern as well, with high concentrations of pharmaceuticals found along the Congaree River. An anomaly here was the Cedar Creek sampling site near the South Cedar Creek parking lot, which showed higher concentrations than upstream sites on Cedar Creek. The area receives heavy use from both paddlers and fishers, and high concentrations are likely due to

visitors urinating near the landing. The park addressed this problem, as well as an expressed need, by installing bathroom facilities.

Organic waste indicators can include an eclectic variety of compounds with ambiguous sources—either natural or man-made, as well as pollutants ranging from insect repellent, flame retardants, pesticides, and detergents, many of which function as endocrine disruptors or can be lethal to aquatic life in high concentrations. Endocrine disruptors are much in the news, since they are often associated with reproductive abnormalities. DEET was detected at all but one site, while herbicides metalochlor and atrazine were detected at all but one site and in half of samples. DEET was prevalent in sites associated with heavy visitor use, including the muck swamp near the boardwalk,

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Grego

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updates. In a cooperative effort with an adjacent hunt club and landowners, Beechler and Jim Edens of USDA-APHIS trapped and collared a couple feral hogs and monitored their activities for several weeks to better understand how feral hogs move between adjacent property and the park.

In addition to the cooperative agreement with Congaree National Park, Edens successfully applied for a grant for a wildlife specialist (Bennett Payne) to oversee

feral hog management activities on properties adjoining the park that have been affected by feral hog activity.

Since February of this year, Payne has worked with adjacent landowners, particularly along the Congaree River, to monitor and trap feral hogs. He is supported entirely by the USDA. Though Payne's activities are primarily outside the park, he and Beechler work cooperatively on management efforts inside and outside the park, and Payne has office space at the park.

Funding for the three-year agreement was especially uncertain this upcoming year

when the park found that it would not be able to use carry-forward funds for the project. USDA-APHIS anticipates having \$20,000 to \$35,000 available in funding for the final year of the contract while Friends of Congaree Swamp will provide another substantial contribution of \$10,000 toward the program, with the anticipation that the park will identify funds later in the year. In addition, Friends of Congaree Swamp prepared a proposal to a funding source suggested by adjacent hunt club members, and we hope to share good news on that proposal in an upcoming newsletter.

Save the date

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in Calhoun County.

The Congaree Swamp CBC often has among the highest counts in the country of Pileated Woodpecker, Northern Flicker, Yellow-bellied Sapsucker, Barred Owl, Winter Wren, Hermit Thrush and others. It is also an excellent opportunity to document the use of the park by Rusty Blackbird, a wetlands-loving blackbird whose numbers have greatly declined the past few decades.

You never know what you will come across. Two years ago, participants saw a Golden Eagle soaring over park property, and the year before participants who were out before dawn witnessed a spectacular display from the Geminid meteor shower.

If you are a novice, an expert birder will lead you around the boardwalk and Bluff Trail in the morning, which together host some of the park's best sites for interesting wintering species and permanent residents, including Winter Wren, Blue-headed Vireo, Brown Creeper, Red-headed Woodpecker, Rusty Blackbird and Fox Sparrow.

Experienced birders can participate in one of our many parties spread throughout the circle. Those parties assigned to the main trail system will meet at the visitor

center parking lot at 7:00 a.m. for this free event. If interested, contact John Grego at 803-331-3366, or email friendsofcongaresswamp@gmail.com

Backyard bird count

Join Friends of Congaree Swamp for a Great Backyard Bird Count hike on **Saturday Feb. 17, 2018**, starting at 8:30 a.m. at the Harry Hampton Visitor Center.

Great Backyard Bird Count activities at Congaree National Park were initiated by the late Robin Carter and we

are happy to continue Robin's tradition. Our observations will contribute to all observations made at the park from Feb. 16-19 as part of the Great Backyard Bird Count.

The hike will cover portions of the Boardwalk, Sims Trail and Weston Lake Loop Trail. The emphasis will be upon engaging birders of all abilities—including beginners—in observing and identifying winter birds at the park.

The park is one of the best places in the Southeast to see winter residents such as Brown Creeper, Winter Wren and Hermit Thrush. Many birds will be high up in the canopy, but we can always count on great looks at some favorite species including Pileated Woodpecker, Black-and-white Warbler, White-breasted Nuthatch, Red-headed Woodpecker, and Yellow-bellied Sapsucker.



Fox Sparrow

Participants should bring binoculars and wear a good pair of walking shoes or boots and weather-appropriate clothing. Water and snacks are also recommended. Contact John Grego at friendsofcongaresswamp@gmail.com or 803-331-3366 if interested.

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Wise Lake and Weston Lake.

Organic waste indicators were also detected in sediment samples. The USGS studied the ability of the park's soils to biodegrade classes of contaminants under study and results were widely mixed, with some of the park's soils demonstrating mixed effectiveness at biodegradation under aerobic conditions, while anaerobic soils such as those found in the muck swamp were less likely to biodegrade pollutants.

The USGS expressed concern about the widespread and repeated incidence of so many of the compounds under analysis. They catalogued many possible effects that the pollutants could have for both land- and water-based food webs, including microbes, invertebrates and vertebrates.

The technical report did not mention possible remedial actions beyond the aforementioned installation of restrooms at the South Cedar Creek Landing, but it will be interesting to learn what additional steps the park may recommend to visitors to reduce their impacts beyond a more general state of mindfulness.



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Please keep your information current to receive special notices about field trips, events, scheduling changes and acknowledgements in addition to a quarterly newsletter.

*For a contribution of \$35 or more, you may choose one:

Baseball cap maroon _____ tan _____

Tan visor _____

Bandana with map of Congaree National Park gold _____ blue _____ red _____

**For a contribution of \$100 or more you will receive a copy of "The Natural History of Congaree Swamp."

In addition, I would like to donate \$ _____ as a gift.

Thank you for supporting Friends of Congaree Swamp!

Friends of Congaree Swamp, P.O. Box 7746, Columbia, SC 29202-7746
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