



KENTUCKY
FIELD NOTES

SPRING/SUMMER 2021

Hope and Renewal



Have we ever needed a spring more than this year? Our winter was not particularly severe, although we had our share of snow, ice, and frigid temperatures. But the optimism we are feeling celebrating spring is less purely weather related and more a deeper appreciation that we can finally see some light at the end of the pandemic tunnel. Hope and renewal are always central to spring, but blooming trillium and trout lilies, singing migratory songbirds, and the sparkling warmth of sunshine speak to truths deeper than usual this year. Life is precious, life moves on, and we all need to appreciate the importance of each other and the natural world.

In this issue of Kentucky Field Notes, there is much to appreciate, and I hope these stories inspire you like all the signs of spring. We celebrate stewardship and visitor improvements at the Dupree Nature Preserve (pg. 3), continued progress on Green River restoration efforts (pgs. 4-5), wetland conservation and restoration (pg. 6), and our staff who help make all this work possible (pg. 7). Just as nature served as an anchor for so many of us during the challenges of the past year, The Nature Conservancy's dedication to our mission and our steady progress on a suite of ambitious projects brought purpose to our at first highly disrupted and, then, all too predictable pandemic routines.

I hope you find deep satisfaction in knowing that your support is essential to our success. Indeed, there is a direct connection between your generosity and better hiking trails that connect people to nature, to a free-flowing and healthier Green River, and protected forests for bats and other wildlife. In our previous edition of Field Notes, we introduced *Our Kentucky* campaign and the exceptional conservation and philanthropic successes it has delivered. Last fall, we had \$2.3 million to raise to reach our \$20 million goal for gifts and pledges. As I write this essay, we are less than \$600,000 from the finish line, with three months to go. If you have not made a campaign gift, there is still time, and a powerful additional incentive to give thanks to an ongoing Trustee match (see back cover).

Enjoy the longer days, renewed optimism, and all the joys of spring.

Yours sincerely,

David Phemister, State Director

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Supporting Visitors and STEWARDSHIP

AT NATURE PRESERVES

The Nature Conservancy recently made several enhancements at its Kentucky River Palisades preserves to support better land stewardship and improved visitation opportunities. These enhancements include a new multipurpose building for Conservancy staff and visitors and new hiking trails.

The new building at Dupree Nature Preserve will make stewardship more efficient and centralized for the Conservancy's staff. Previously, staff had to store equipment and supplies in several different areas, which made preparing for stewardship activities such as trail maintenance and invasive plant removal more time-consuming.

“We needed permanent, lockable, secure storage for our stewardship equipment,” says Chris Minor, director of land management and fire manager for the Kentucky chapter. “We have a small staff and it is critical we are efficient with our time. Every hour we spend driving is an hour we

can't spend maintaining trails, planting trees, or removing invasive species like bush honeysuckle. Ultimately, this is about better results on the ground.”

The building will serve not only as equipment storage but also as a gathering place for Conservancy-sponsored events at the preserve. These visitors will find outdoor covered space next to the enclosed building, providing shade on hot days or shelter from the rain.

The stewardship staff is also working to enhance the visitor experience with additional hiking trails on both Dupree and Crutcher nature preserves. “At Dupree, we're looking at a ¾- to 1-mile addition and at Crutcher a shorter ¼- to ½-mile trek that would lead down to a nice ephemeral waterfall,” says Minor. “These are really special places and the donors who made these preserves possible all wanted them to be accessible—to share their love of the natural world with others.”



Exploring Accessibility Improvements

Minor and other Conservancy staff are exploring ways to make Dupree Nature Preserve more accessible for visitors with mobility constraints. Improved accessibility would help realize Tom Dupree's full vision of creating a place where all people could come together to learn about and enjoy the outdoors.

“Accessibility is challenging on our nature preserves, which are relatively remote and have rough, rugged terrain,” Minor says. “We know we can't make every trail accessible for all, but if we could provide at least some ADA-compliant access, that would be a wonderful thing.”

Potential future accommodations could include an extended gravel trail with a much gentler slope, better bridges, and rerouting the trailhead.



Breathing New Life Into the GREEN RIVER

DAM REMOVALS IMPROVE RIVER

Mike Hardin comes from a fishing family. He remembers listening to fishing stories from his father, other relatives, and older anglers. These were tales of fishing the free-flowing waters of the Licking River, where muskellunge would follow redhorse suckers in the spring of the year. Now, Hardin believes these stories of free-flowing rivers will include the Green River, as defunct locks and dams are removed and healthier habitat restored. This process began with the removal of Green River Lock and Dam #6 in 2017. The removal of Lock and Dam #5 (anticipated in the fall of 2021) will connect 200 miles of free-flowing Green River for the first time in more than a century.

CLOCKWISE FROM TOP LEFT A female pink mucket mussel from the Green River © Monte McGregor/Kentucky Department of Fish and Wildlife Resources; The endangered Kentucky cave shrimp has better habitat thanks to the removal of Green River Lock and Dam #6. © Michael Durham/National Park Service; Mussels seen in the foreground of Green River Lock and Dam #5 © Monte McGregor; Muskellunge benefit from the free-flowing river waters that dam removals create. © M Huston/Shutterstock; Removal of Green River Lock and Dam #5 is anticipated in the fall of 2021. © Mike Wilkinson; Green River Lock and Dam #6 was removed in 2017 © Philip Scott Andrews



“It’s not surprising it’s such a great river; it’s so rich and productive,” says Hardin, assistant director of the fisheries division for the Kentucky Department of Fish and Wildlife Resources. “I expect these dam removals to improve the population of sportfish not only because of the direct benefit of free-flowing water, but also because it will bring in stuff they like to eat—like suckers. Suckers will get into the riffle and the musky will not be far behind. That’s what I envision.”

Anglers and sportfish are not the only groups to benefit from these dam removals. Underground stream conditions at Mammoth Cave National Park have improved dramatically, benefiting rare species of fish, shrimp, and crayfish. No longer kept artificially high by the Lock and Dam #6 pool, water in the cave has dropped, allowing underground streams at the park to flow freely.

“We have historic photographs taken in Echo River from before Lock and Dam #6 was constructed in 1905-1906,” says Rick Olson, park ecologist at Mammoth Cave. “We are getting water levels

pretty close to what they were before the dam. The fact that the flow is now largely unimpeded means that sediments in the bed of streams are sorted better, which means that the substrate types are more varied and overall habitat has improved.”

These substrate types now include gravel and bedrock instead of just silt. This habitat variety should benefit the many cave-adapted species in the park’s underground streams, including fish, crayfish, and the endangered Kentucky cave shrimp. The park’s monitoring program won’t take data from the sites for another year or so because the procedures are still being finalized. However, due to the long life spans of these species, Olson does not expect rapid increases in populations.

“This is an amazing thing we’re seeing in the Green with these dams coming out.”

– Monte McGregor

“Getting habitat conditions back to what they were before the dam is almost certainly a good first step,” Olson says. “Most often, wildlife management is actually habitat management. Make a good home and they will come, so to speak.”

Habitat is also improving above ground, where the Green River’s many species of fish and mussels thrive in free-flowing water. The river contains approximately 150 species of fish and 72 mussel species, including 17 that are federally listed. Monte McGregor, director of the Center for Mollusk Conservation at Kentucky Fish and Wildlife, says the removal of Lock and Dam #5 will open up critical fish and mussel migration routes.

“This is an amazing thing we’re seeing in the Green with these dams coming

out,” says McGregor. “That section of the Green, right where Lock and Dam #5 and #6 are, is the best habitat. We’re going to open up seasonal migration for fish and mussels all the way up to Green River Lake.”

McGregor plans to sample the former site of Lock and Dam #6 soon for possible changes to mussel populations. He says it takes years to see changes in mussels, and ultimately the removal of Lock and Dam #5 will yield the greatest results.

People and nature are both thriving since the removal of Lock and Dam #6. Paddling trips can now extend through the dam’s former site, and improved recreation opportunities means increased economic activity in local towns.

“It’s a much more enjoyable float,” says Danna Baxley, director of conservation for the Kentucky chapter. “With the dam, if you were on a float trip through Mammoth Cave, you could not get to Brownsville. Taking out Lock and Dam #6 allowed Brownsville to be a part of this nature-based economy.”

Hardin’s team installed a parking lot and canoe launch at the dam’s former site, making it easy for people to enjoy the river. For Hardin, the dam removals are breathing new life into a river long diminished by their presence.

“Dams decrease the richness of aquatic life,” he says. “So the removal of the Green River dams represents a big step toward restoring the full and vibrant life of this river.”

Partnerships Enable Wetland RESTORATION AND FOREST CONSERVATION

The Nature Conservancy accomplishes its ambitious conservation goals alongside partners. Thanks to a productive partnership between the Conservancy, the Natural Resources Conservation Service (NRCS), and the Imperiled Bat Conservation Fund (IBCF), 244 acres of wetlands and forestland in western Kentucky containing critical habitat for federally listed bats will be permanently protected and restored.

“This is a special piece of ground adjacent to Obion Creek State Nature Preserve, and it is protected thanks to funding from both NRCS and IBCF,” says Shelly Morris, director of floodplain strategies for the Kentucky chapter. “Each program had its own eligibility criteria, and it required some creativity and flexibility to pull this off. TNC’s role was to bring the parties together and keep everyone working until we got it done.”

Additionally, this project wraps up the remaining match requirement for the 2015 Wetland Reserve Enhancement Partnership (WREP) project. The Conservancy must provide this match to unlock NRCS funding.

NRCS wetland easement projects usually do not include more than half of the enrolled acreage in existing forestland. Instead, NRCS seeks to take frequently flooded agricultural lands out of production and restore them to bottomland hardwood forests. With the Obion Creek tract, there was simply too much forestland for NRCS to do the deal itself. The Conservancy and NRCS needed an additional partner, and the IBCF was the perfect fit.

“There are a lot of ways to do partnerships, but it works best when folks bring different skills or resources towards a common goal. In this case, we had the chance to protect an important

property that wasn’t eligible through traditional NRCS programs,” says Lee Andrews, Kentucky Field Office Supervisor for the U.S. Fish and Wildlife Service. Andrews’s office coordinates with the Kentucky Natural Lands Trust, which administers the IBCF, to ensure that IBCF funding is used in a manner that best benefits federally listed bats. “This particular parcel of land is a real gem, adjacent to already protected areas. Any time you have the opportunity to build on these protected lands, fish and wildlife benefit.”

Morris says the Obion Creek tract is one of the best and most intact bottomland hardwood forests in the area. It is particularly important because so much forestland has been converted to agriculture. “The bats really love these creek corridors,” says Morris. “It’s where they forage for food, and the types of trees in this area provide excellent habitat. It’s good bat real estate for any kind of bat, but especially the federally listed Indiana bat and the federally threatened northern long-eared bat.”

According to Andrews, several bat colonies already utilize the area. “The more forestland we can protect for these bats and the numerous other wildlife species that call these woods home, the better,” Andrews says. “This property is exactly the sort of protection we need to be doing in this landscape. When coupled with the thousands of acres NRCS and TNC are restoring, this project is a great story—for bats and people.”



New Faces: Nicole Humphrey

Nicole Humphrey is the Kentucky chapter's new associate director of development. Humphrey grew up in Dallas, Texas studying classical ballet and piano. Her appreciation for nature and the outdoors began at an early age, from playing in the woods to family trips to Colorado, where she discovered a love of hiking.

"Walking outside and looking up at trees is something I do daily," Humphrey says. "Having access to nature is personally really important to me."

Humphrey moved to Maui, Hawaii after college to work on an organic farm. What began as a three-month job turned into six years in Maui, where she co-founded a nonprofit professional dance company and worked in development for the Maui Arts and Cultural Center. She moved to Kentucky to be near her husband's family and joined the Fund for the Arts team in Louisville.

"When I found the Conservancy opening, I was so excited to have the opportunity to work for a conservation organization. I feel the urgency to do more," Humphrey says. "The challenges we face—especially with climate—are immense. Being able to be a small part of the solution is so gratifying. Starting a job at the Conservancy is literally a dream come true."



Staff Spotlight: Shelly Morris

Seventeen-year Conservancy veteran Shelly Morris often says she has her dream job. The Benton, Kentucky native was born and raised in western Kentucky, where she grew up playing in the woods and creeks.

"I spent a lot of time camping at Land Between the Lakes, and I always loved being outside," Morris says. "When I went to college, I didn't know a conservation career was an option."

Morris got her bachelor's degree in biology and a master's in biology with a focus on stream ecology. She became a Conservancy member while she was a student at Murray State University. Later, she applied to work with the Conservancy for a three-year position.


"Three years turned into a career," Morris says. "It's my dream job because of the mission, the people, and the organization. It's just a very caring, thoughtful organization to work for."

Morris says she loves working with partnerships that bring people and resources together to make conservation happen. "Sometimes you start out really close together, and sometimes really far apart," she says. "But if you focus on finding common ground and are patient and persistent, you can usually make progress."

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TNC and partners are working hard to remove Green River Lock and Dam #5 as soon as the fall of 2021. © Mike Wilkinson

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The Nature Conservancy's generous Kentucky Board of Trustees and Trustees Emeriti have formed a matching fund of \$295,000 to inspire others to support the Kentucky chapter's highest conservation priorities. As *Our Kentucky* campaign comes to a close, we hope you'll help us reach our ambitious fundraising goals with a gift that will support Kentucky conservation. (Gifts of \$1,000 and more qualify for the Trustee Match). Please designate Trustee Match on checks.

