



KENTUCKY
FIELD NOTES

SPRING/SUMMER 2024



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Partnerships in Action

Supporters often ask me how The Nature Conservancy works with other conservation organizations. In reply, I first affirm that partnerships are central to virtually everything we do and critical to our success. Second, I explain that we work with like-minded and similarly focused organizations, especially on ensuring high standards in the land trust community and advocating for more public investments in conservation in Kentucky and nationally.

Third, and most importantly, I stress that our most significant and successful partnerships are forged with entities that bring a different skill-set, expertise, or connection to the table. In other words, we are often looking to partner with an organization or entity less because they are like The Nature Conservancy and more because we both bring something different to the endeavor. While we need to share a common vision for the project or effort, it is the diversity of approaches that makes good partnerships work.

This issue of Field Notes includes several examples of these mutually beneficial partnerships. The Nature Conservancy can acquire land more quickly and efficiently than the Daniel Boone National Forest, but the Daniel Boone is the more appropriate long-term owner and manager (page 3). Green Forests Work has tested and perfected mine land reforestation techniques, and The Nature Conservancy can provide access to available sites for restoration and supplement funding for the plantings through relationships with companies like Beam Suntory (page 6). The Natural Resources Conservation Service has the funding, agricultural retailers have the relationships with farmers, and The Nature Conservancy has the interest and ability to innovate and test new approaches (pages 4-5). In the end, we protect more land, reforest more former mine sites, and plant more cover crops through partnerships that thrive based on the diversity, as opposed to the similarity, of participants. I hope you will enjoy reading more about these partnerships in the pages ahead.

In closing, I want to say a few words to honor Bruce Orwin (page 7). Bruce was, in so many ways, an incredible partner to The Nature Conservancy. He was the first person I asked to join our Board of Trustees, and he was a steadfast personal and professional friend from my earliest days in Kentucky. Bruce was straightforward and grounded in a complex and changing world, and he loved The Nature Conservancy's unwavering focus on getting stuff done. We loved you too, Bruce, and we miss you.

See you outside,

David Phemister
Kentucky State Director

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COVER A farmer walks between a corn field (left) and a native grass buffer (right); buffers like this one protect water quality in nearby streams and rivers. © Mike Wilkinson; THIS PAGE LEFT TO RIGHT A black bear uses a newly created wetland area on the Cumberland Forest Project. © Courtesy of Dr. Steven Price; Kentucky State Director David Phemister © Courtesy of the Phemister family

A Historic Partnership for Land CONSERVATION

In 1967, eight years before we had an official Kentucky program, The Nature Conservancy transferred 379 acres of Whitley County forestland to the Daniel Boone National Forest. This project was the beginning of a partnership that has added more than 7,700 acres to the forest.

“The Daniel Boone National Forest provides access for all Kentuckians to hike, camp, hunt, and enjoy the outdoors—it’s a wonderful resource for Kentucky,” says Dian Osbourne, director of protection for TNC in Kentucky. “We have relatively little public land, and the Daniel Boone is a true stronghold. Its location overlaps so well with our conservation focus in eastern Kentucky. Our partnership is so important to both entities.”

The Appalachian Mountains of eastern Kentucky, a climate stronghold and haven for a great diversity of plants and animals, are TNC’s top land protection priority. These mountains provide a critical migratory corridor for mammals, birds, and amphibians to move north as the planet warms.

When a landowner is ready to sell, TNC can move quickly to acquire the land. The goal is to transfer the land to our state or federal partners as soon as funding is available. The Land and Water Conservation Fund, a top priority for TNC’s advocacy work, now provides a permanent source of funding for such transfers.

“TNC has been critical in helping us acquire lands here,” says Scott Ray, forest supervisor for the Daniel Boone National Forest. “The process the Forest Service uses to acquire land is time-consuming; TNC will acquire and hold the land until

we can get through that process. We work with TNC to identify key places on the landscape that benefit wildlife diversity and water quality. People selling their land often want to see it go to public access. The more access the public has, the more the community can benefit from having a national forest on their doorstep.”

“TNC has been critical in helping us acquire lands.”

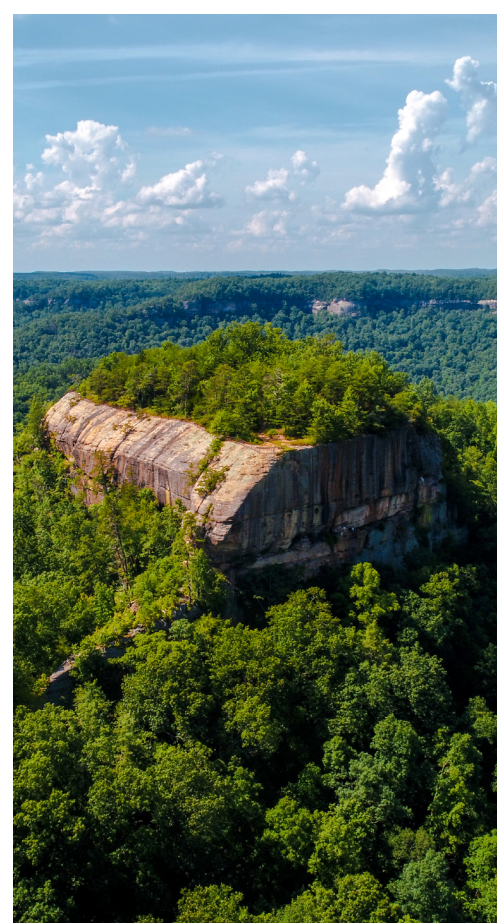
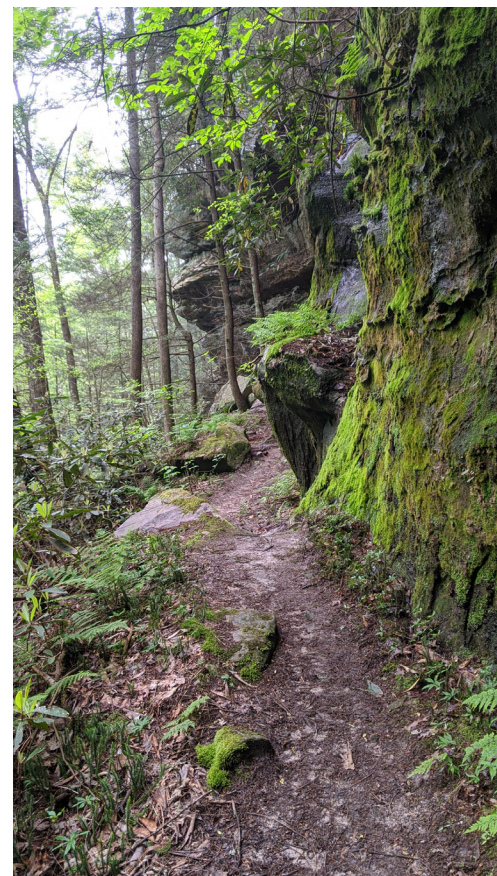
Scott Ray,

Daniel Boone Forest Supervisor

Once the land is protected, TNC continues to assist the Forest Service using controlled burns to enhance forest health and reduce wildfire risk. Chris Minor, TNC’s director of land management and fire manager, partners with the Forest Service and the Kentucky Division of Forestry for controlled burns.

“We have partnered to implement controlled burns with the Daniel Boone for nearly 20 years,” Minor says. “This has been a great partnership. We’ve worked together on science and monitoring, and we are adapting these programs for bigger impact. We helped the Boone reach its all-time record in 2021 with more than 20,000 acres burned.”

TNC’s partnership with the Daniel Boone National Forest continues, with a recent addition of 131 acres in Jackson County. “We’re helping each other,” says Osbourne. “We protect a piece of property that has great significance ecologically, and they manage it well. I’m proud of this partnership, and I look forward to it continuing well into the future.”





Building Better SOILS

Jesse Horn is a lifelong farmer. In Philpot, Kentucky, a community east of Owensboro, Horn farms 4,000 acres of corn and soybeans with his father. The father-son team also sells seed, crop nutritional products, and equipment to other farmers in the area.

Horn is passionate about planting cover crops, a regenerative agriculture approach that aims to have something growing in the field year-round. Keeping these cover crops—crimson clover, cereal rye, barley, and others—in the ground over the winter prevents erosion and loss of western Kentucky's rich soils into waterways. Cover crops protect water quality in nearby rivers and streams, and produce healthier soils that retain more water, support beneficial insects, and store more carbon.

As much as Kentucky's soils need cover crops, however, Horn says they can be a hard sell for farmers.

Cover Crop Barriers

"We have many farmers who follow what we're doing, and I also take the opportunity to bring it up in conversations," Horn says. "Cover crops are not new, but they are a challenge to plant."

During the busy harvest season, farmers must first focus on getting their cash crops, such as soybeans and corn, out of the ground and to market. Finding time to also plant a cover crop for the winter is not at the top of most farmers' minds.

"The harvest must take priority," Horn says. "When you invest this much money into growing your cash crops, any delay can mean quality degradation or storm damage. The longer the crop is in the field, the more risk there is to the farmer to get a return on this massive investment."

Time is not the only barrier preventing farmers from planting cover crops. Equipment, labor, and technical knowledge also challenge farmers interested in protecting their soil. Horn hears from many farmers who want to explore cover crops, but options such as using a seed drill or airplane seeding are expensive. There is an option, however, that shows great promise for addressing many of these barriers.

Meeting the Challenge

The Nature Conservancy and the Natural Resources Conservation Service (NRCS) recently piloted air-seeders with three farmers in Kentucky. This equipment mounts on a farmer's combine, using air pressure to spray out cover crop seed during the harvest. Residue from the farmer's cash crop covers the seed, which then takes root and produces a cover crop for winter. Using an air-seeder is a relatively simple process that farmers can quickly adapt to other pieces of farm equipment as well. The pilot received positive



reviews from farmers, and the equipment costs much less than alternatives such as using a seed drill.

“We can drastically reduce the cost of equipment, time, manpower, and fuel,” says Steve Blanford, Kentucky state soil scientist for NRCS. “You’re not running across the field more times after the harvest.”

Getting this equipment into the hands of farmers presented both an opportunity and a challenge. A cost-share program would provide an incentive for farmers to try the equipment, but NRCS had never done an equipment cost-share before. So Blanford reached out to TNC’s director of conservation, Danna Baxley, and director of agriculture, Zach Luttrell, to create a partnership.

“With this partnership, we will cover 70 percent of the equipment cost for farmers,” Blanford says. “That addresses the time, cost, equipment, labor, and knowledge barriers.”

Investing in Farmer Success

TNC’s advocacy helped pass the landmark Inflation Reduction Act, which created unprecedented investments in climate change solutions. One of those investments is the Partnership for Climate-Smart Agriculture program, which will fund this innovative equipment cost-share with Kentucky farmers. Blanford needed a way to put that funding into action.

“The difference between a great idea and figuring out how to actually make it happen is where TNC can really benefit our partners,” says Luttrell. “In previous partnerships, TNC owned equipment that farmers used free of charge. This isn’t something we can do at scale, however. By including the expertise and capacity of agriculture retailers in the project, it’s possible.”

Horn and his team are currently distributing the air seeders and providing related support to farmers in eight western Kentucky counties; an additional

retailer will distribute to three more counties. Farmers will share data and feedback with TNC and NRCS for the life of the project through 2028, and then they will own the equipment outright with no further reporting requirements.

“My hope is that this addresses those hurdles to cover crops head-on,” says Luttrell. “That’s where we’re really going to make a difference with conservation agriculture. There is much progress to be made, and the way to do that is to ask farmers, ‘What are your biggest challenges?’ Then we can develop new solutions.”

Horn already has multiple contracts signed with farmers who are eager to receive and use the new equipment, and interest is building. Thanks to investments in farmer success and an innovative partnership, the next harvest season in Kentucky will bring more cover crops to fields, benefiting farmers and conservation.

Restoring Wetlands in the MOUNTAINS

On a remote Bell County site in the Appalachian Mountains of eastern Kentucky, nature is returning to a former surface mine. A young forest of oaks and short-leaf pines is rising from rocky soil just two years after The Nature Conservancy, Green Forests Work, and Beam Suntory planted the site with nearly 100,000 trees interspersed with native wildflowers and grasses. Look closer, and you will see something else. Frogs and salamanders are now thriving in wetlands long absent from the site.

“Honestly, this was an unexpected addition,” says Chris Garland, Central Appalachians project director for TNC in Kentucky. “It wasn’t in our original plans for the site, but Dr. Chris Barton and his colleagues from the University of

Kentucky approached us about placing these shallow-water wetlands, and it was a great opportunity for wildlife benefits.”

Barton is a professor of forest hydrology and watershed management, as well as the founder of Green Forests Work. His team has installed wetlands on former mine lands in the Monongahela National Forest in West Virginia, but they did not have any sites in Kentucky. The Cumberland Forest Project’s Ataya property and the reforestation work TNC and its partners are doing there were a perfect fit for their research.

“At first, we put in these areas—vernal wetlands and ephemeral wetlands—primarily for sediment control and water quality issues,” says Barton. “But quickly, we realized they were being used by salamanders and frogs.”

Barton and his team began enhancing the areas with rocks and woody debris to provide habitat for the new wildlife. They built mosaics of wetlands with half a dozen installed on each reforestation site. Barton brought in Dr. Steve Price, a professor of stream and riparian ecology, to quantify the wildlife benefits of the new wetlands. Price’s team ran nets through the wetlands and set up acoustic recorders and camera traps to study the wildlife using the areas. They compared the Ataya site to reforested sites on the Paul Van Booven Wildlife Management Area and natural wetlands in the Daniel Boone National Forest.

“The Paul Van Booven sites were reforested 8-23 years ago,” Price says. “We found more species of frogs breeding on the Ataya site after just two years than on either of those other sites. We detected spotted salamanders and eastern newts, which is remarkable given that these wetlands were just built.”

The researchers found five species of bats using the newly built wetlands, elk knocking down camera traps, bears and snakes, coyotes and foxes, and other small mammals. The addition of wetlands on this property is helping an array of wildlife thrive in the mountains of eastern Kentucky.

“Bats and amphibians are species of global concern right now, as are a lot of migratory species,” Barton says. “A lot of these species have been affected by surface mining. It is heartening to see how quickly wildlife respond to these restoration efforts.”



Remembering BRUCE ORWIN

Last fall, Bruce Orwin, a long-time TNC supporter, Board member, conservationist, and dedicated husband, father, and friend, passed away. The Nature Conservancy celebrates and honors Orwin's life.

"What first stood out to me was his humor and humanity," says Robert Edmiston, Trustee Emeritus for TNC in Kentucky. "Bruce's tenacious spirit, enthusiasm, and calmness were the cornerstones of his leadership, and his unwavering dedication was invaluable to The Nature Conservancy."

Orwin worked with TNC long before he became a Board member. He provided legal counsel to our protection team, handled title work, and closed transactions between TNC and our partners at the Daniel Boone National Forest. He loved protecting land for the public to enjoy.

"Bruce might call himself old-school TNC. He was passionate about land protection, especially in the Appalachian Mountains. He loved results you could walk around on," says David Phemister, state director for TNC in Kentucky. "Bruce was not just a Board member, he was a real friend. He was a very gentle, kind, and thoughtful person. He was deeply authentic, grounded in the community he grew up in, and grounded in the land."

Lee Andrews, field office supervisor for the U.S. Fish and Wildlife Service in Kentucky, got a call from Orwin while the two were working on a land transaction in Pulaski County. Orwin had a farm in the Buck Creek watershed,



and Andrews was working to develop a conservation strategy for the critically imperiled Buck Creek darter, a tiny fish known to exist in just a few streams in eastern Kentucky.

"Bruce and I just started talking, and he reminded me that he had a creek running through his property and asked if we would come and take a look," Andrews says. "Lo and behold, Kentucky's rarest fish occurs in the stream on his farm. It took the known streams from three to four."

Andrews and his team discovered the fish on Orwin's farm just months before Orwin passed away. It was a fitting contribution to Orwin's conservation legacy.

"His sense of quiet responsibility and love for the natural spaces of Kentucky was an asset to TNC, and I am proud

to have called him a great friend," Edmiston says. "The impact and legacy that a well-lived life leaves behind is truly significant."

In Memory

Join us in celebrating the incredible life and legacy of Bruce Orwin, a true champion of conservation. To honor Bruce and his love for conserving Kentucky's natural beauty, consider making a gift in his memory. These funds will support the work of The Nature Conservancy in Kentucky.

To make a gift, please mail a check to the TNC address on the back of this newsletter. Please add a note that your gift is for this tribute to Bruce. Thank you!

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The Rockcastle River © Mike Wilkinson



Middlesboro Community Center solar installation © Mike Wilkinson

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Benefiting Communities

The Nature Conservancy's Cumberland Forest Community Fund invests in solar installations in Kentucky and outdoor recreation businesses in Tennessee. Learn how local communities are benefiting from a 253,000-acre conservation project. Filmed by Wilkinson Visual. Scan this QR code to watch!

