

SUMMER 2024

field Tennessee notes

HIGHEST PEAK IN WHITE COUNTY ▪ SHORT-LEAF PINE WOODLANDS ▪ NATIVE GRASS AND WILDFLOWER SAVANNAHS ▪ CAVES ▪ OLD-GROWTH HEMLOCKS ▪ HEADWATERS OF THE CANEY FORK RIVER ▪ RESIDENT TURKEY, QUAIL, BOBCATS, OTTERS, GOLDEN EAGLES, SPOTTED SKUNKS AND BLACK BEARS ▪ FIRESTONE LAKE ▪ AND THE POTENTIAL TO WELCOME BACK RUFFED GROUSE, WHITE FRINGELESS ORCHID AND OTHER PLANTS AND ANIMALS

All of this biodiversity. All of these diverse habitats. All of these water resources. All in one place.

In 2018, The Nature Conservancy gratefully accepted a donation of 5,763 acres in the Cumberland Plateau from Bridgestone Americas, Inc. As luck would have it, Bridgestone Americas kept the property undeveloped during more than three decades of ownership. Originally intended as a corporate retreat, Bridgestone Americas eventually sought input from TNC on best ways of managing these lands and waters. Together, the organizations crafted a comprehensive forest management plan that called for restoring declining shortleaf pine forests, treating hemlock trees against an invasive pest, securing Forest Stewardship Council® FSC® - C008922 certification to guide sustainable practices, and exploring ways to improve the property's ability to store and sequester more carbon. Today, the Bridgestone Nature Reserve at Chestnut Mountain is a living laboratory and research platform where we implement these strategies, and many more.

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The Nature Conservancy's mission is to conserve the lands and waters on which all life depends.

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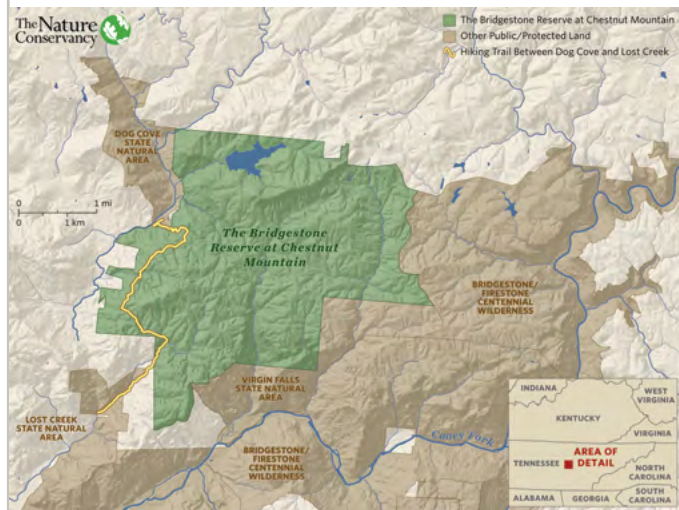
From The Director



It is hard to believe that more than five years have passed since The Nature Conservancy assumed ownership of the Bridgestone Nature Reserve at Chestnut Mountain. It was monumental news back then and remains a centerpiece of our work in Tennessee.

Fondly referred to by our staff as “Chestnut Mountain,” the Reserve represents the type of large-scale, multi-dimensional, collaborative project that TNC is pursuing more and more around the world. Case-in-point, the work that we do on Chestnut Mountain’s 5,763 acres also impacts an additional 70,000 acres of conservation lands surrounding the Reserve in the Cumberland Plateau.

Working with partners to collectively conserve this sizeable mosaic of protected areas extends even more broadly to the Appalachian Mountains. A globally significant hotspot for biodiversity and top priority for TNC, our Tennessee program works as part of an 18-state initiative focused on conserving this vast landscape’s clean and abundant freshwater resources and unparalleled biodiversity. The Appalachians’ intact forests and woodlands also do double duty as important carbon reserves.



For TNC, Chestnut Mountain requires an “all hands on deck” approach to conservation that is key to conserving large landscapes. Here, our staff taps into every tool and talent in our conservation arsenal to advance TNC’s mission: scientific research, community outreach, land protection, donor engagement, land and water management, mapping, wildlife inventorying, partnership building and much, much more.

We could not be more proud of what we have accomplished since receiving the gift that has become our

Bridgestone Nature Reserve at Chestnut Mountain. The following pages highlight all that has been possible at Chestnut Mountain thanks for your continued support.

To a Healthy Today and Tomorrow,

Laurel Creech

Teamwork Makes the Dream Work

Did you know that our Tennessee program has a “Green Team?” As one of the world’s leading conservation organizations, The Nature Conservancy is always looking for ways to minimize the impact that our daily operations have on the planet. In an effort to do our part in Tennessee, staff members in our state organized a Green Team to help advance TNC’s sustainability goals. Using 2019 data as a baseline, our Tennessee Green Team is identifying ways to reduce one-quarter of our carbon emissions by 2025 and achieve net zero emissions by 2050 (or sooner). Working remotely, reducing travel and gradually assembling a more earth-friendly fleet of vehicles represent actions that are already helping us make great strides. Our Green Team also collected energy audits for Tennessee program offices to clarify needs. Next up is exploring whether implementing small changes and new practices are truly moving the needle forward towards reaching our 2025 sustainability goals. Stay tuned!



Rivian EV Charging Station at the Orchard Bog Preserve © TNC

Our Newest Faces

Welcome to the following new members of our staff.



Janie Becker
 Tennessee State Wildlife Action Plan (SWAP) Conservation Manager



Tyler Sanderson
 Floodplain Conservation Manager (TN & KY)



Michael Vasquez
 Fire Management Specialist (TN & KY)

Congratulations to the following staff for reaching milestones with TNC.

SHELLY MORRIS 20 Years
 CORY HOLLIDAY 20 years
 COREY GILES 20 years

KATHERINE MEDLOCK 20 years
 HOPE WOODHOUSE 5 years
 CHRIS MINOR 25 years



White Oak Acorns © Paul Wray, Iowa State University, Bugwood.org

White Oaks Fuel a Symbiotic Relationship Between Trees and Ecosystem Health

Majestic white oaks (*Quercus alba* L.) reach up to 100-feet and fulfill a variety of roles for wildlife and people, earning their distinction as the most important hardwood tree species in the eastern United States. Long-lived up to 500 years, white oak trees carry historical significance in many landscapes. This longevity also means centuries of sequestering and storing carbon in massive frames and in extensive root systems that do double duty as water filters.

Leafy canopies, shaggy bark and tasty acorns attract and benefit a myriad of wildlife. Many people seek products—from wine and whiskey barrels to hardwood flooring and cabinetry—harvested with strong, rot-resistant wood from these magnificent trees. While white oaks are present at the Bridgestone Nature Reserve at Chestnut Mountain, restoring them to their grandeur requires planting more trees and creating regular disturbances, like periodic fires, that happened here in the past.

“The status of white oak at Chestnut Mountain is similar to the trends we’re seeing across southern Appalachia,” says Britt Townsend, The Nature Conservancy’s conservation forester in Tennessee. “We have a fair amount of mature trees in the overstory that are 80+ years in age but hardly any young trees to replace the older generation.”

In response, last spring TNC planted 150 trees in part of the Reserve where they would have historically occurred. This collaborative restoration effort included trees grown at the Tennessee Division of Forestry’s nursery with acorns collected from the Jack Daniel’s Tree Orchard by researchers from the University of Tennessee’s Tree Improvement Program. “Then it goes full circle,” adds Townsend. “The researchers return to collect acorns at Chestnut Mountain to establish genetic diversity and more resilient trees throughout Tennessee. It’s all in the name of nature.”



Watch our webinar about white oaks in Tennessee at nature.org/tnwebinars.



Chestnut Mountain Burn © TNC

“Good Fire” at Chestnut Mountain

It seems counterintuitive, but safely and carefully delivering low intensity fire can improve the health of many types of forests. Designed to mimic natural disturbances that historically occurred across the Cumberland Plateau, these prescribed burns remove underbrush and small trees to prevent wildfires and protect mature trees storing the most carbon. To date, TNC’s fire team burns approximately 200 acres each year at Chestnut Mountain, with plans to do more in the future.

Managing forests creates resilience to a changing climate.

Trees represent our best natural line of defense against threats to plant and animal species loss taking place on a global scale and excess carbon and pollution in the atmosphere. The Nature Conservancy approaches managing forests at the 5,763-acre Bridgestone Nature Reserve at Chestnut Mountain with these priorities in mind.

- 1 Scarlet tanagers (*Piranga olivacea*) are common in oak forests, but stay out of sight as they forage and nest in the leafy upper branches. Protecting and restoring mature forest habitat is key to safeguarding these birds.
- 2 Bats like this Rafinesque’s big-eared bat (*Corynorhinus rafinesquii*) seek out deep fissures and flaky snags characterizing the bark of white oak trees as ideal roosting spots during warmer months.
- 3 Oak trees, including white oaks, harbor more moth and butterfly species than any other tree. In their larval and caterpillar forms, these butterflies and moths serve as an important food source for wildlife living in the surrounding forest.
- 4 Among several species of oaks available to them, Eastern fox squirrels (*Sciurus niger*) find acorns from the white oak family to be the tastiest.

Native trees fulfill an important role in managing atmospheric health. In response, TNC implements an adaptive approach to amplifying forest restoration at Chestnut Mountain to benefit species diversity and respond to a changing climate.



SEQUESTER

- Actively manage areas with younger trees, which are more effective at removing carbon from the atmosphere while they grow. These newer forests benefit from improvements to diversity and structure, including the introduction of climate-adapted tree species that scientists believe will be better suited to future conditions.
- Employ management tools that are guided by the Chestnut Mountain’s Forest Stewardship Council® certification. These include forest thinning, pest management, prescribed burning and sustainable harvesting in accordance with economic, social and ecological standards.



STORE

- Employ a flexible strategy that supports the health of a mature forest dominated by older trees, which is more effective at storing carbon removed from the atmosphere in previous years during periods of more rapid growth. These established forests exhibit characteristics of resilience such as a variation in tree sizes and ages, a diversity of species, ample deadwood and a complex structure.
- Continually monitor and intervene only in response to threats to the forest’s biodiversity and species.



White Oak © U.S. Forest Service/Kyle Brooks; Cerulean Warbler © USFWS/Ron Austing; Rafinesque’s Big-Eared Bat © TNC; Luna Moth © Creative Commons/Benny Mazur; Eastern Fox Squirrel © USFWS/Gary Eslinger

Leveraging Conservation Within and Beyond Chestnut Mountain



Government Agency Partners at Chestnut Mountain © TNC

AGENCY PARTNERS

Why conserve 5,763 acres of nature when you can leverage conservation at 70,000? That is why The Nature Conservancy has begun meeting with state agencies who manage lands that connect with the Bridgestone Nature Reserve at Chestnut Mountain. Most recently, representatives from Tennessee State Natural Areas, the Tennessee Department of Environment and Conservation, the Tennessee State Division of Forestry and the Tennessee Wildlife Resources Agency (TWRA) met at Chestnut Mountain to exchange ideas about conserving the larger landscape.

“We are excited about what this means for restoring native ecosystems that once inhabited the Cumberland Plateau,” says Aubrey Deck, TWRA’s Region 3 Wildlife Management Area Coordinator. “Although objectives among our organizations differ, we all want to proceed with the latest and greatest science and tools.”

In addition to conserving and restoring healthy and resilient wildlife habitat, the partners also talked about public access, recreation, education and research. According to Deck, collaborating will help the partners progress from identifying needs to implementing solutions. He adds, “While staying true to our individual missions, our collective efforts will enhance habitat for dozens of imperiled songbirds, pollinators and wildflowers as well as game species such as deer, turkey, rabbits and quail.”



Uplands Lifelong Learning Institute © TNC

LOCAL COMMUNITIES

After attending a presentation about Chestnut Mountain, members of the neighboring **Uplands Lifelong Learning Institute (ULLI)** couldn’t wait to visit in person. ULLI, a non-profit educational institute, owns and stewards 500 acres of forest. During their tour, they sought to learn about forest health and management practices that they could apply at their community center and property.

ACADEMIA

In 2022, University of Tennessee (UT) graduate student, Jake Webster, spearheaded a research project at Chestnut Mountain titled “Complex Planting Patterns for Increasing the Structural Diversity of Shortleaf Pine Restoration.” Funded with a small grant from The Nature Conservancy, this work continues with annual visits from UT students who return to collect data that TNC uses to inform forest management at the Reserve.

Chestnut Mountain hosts the first Motus Wildlife Tracking Tower in Tennessee and also in the interior southeast states. Installed as part of a research collaboration with Tennessee Wildlife Resources Agency, Metro Nashville Parks and Recreation, and The University of Tennessee at Chattanooga, the tower operates as part of an international network that tracks migrating bats, birds, insects and other wildlife with radio telemetry.

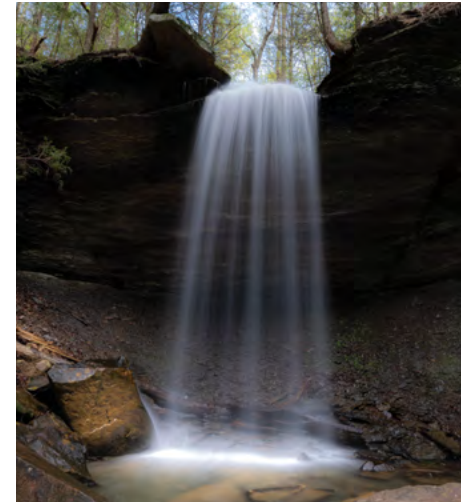


Jake Webster poses with a Shortleaf Pine © TNC



Motus Tower at Chestnut Mountain © TNC

The Gift that Keeps on Giving



Dry Creek Falls at Chestnut Mountain © Terry Cook/TNC

When Bridgestone Americas bestowed their generous gift of 5,763 acres in the Cumberland Plateau to The Nature Conservancy—the largest donation in the history of TNC’s Tennessee program—they established an enduring legacy that supports our state’s natural landscape, its cultural heritage and the health of Tennesseans.

“We are honored that Bridgestone entrusted The Nature Conservancy with the management of this important forest,” says Terry Cook, TNC’s former Tennessee state director who presided over the transaction in 2018. “They not only appreciated the value of the acres that comprised the Reserve itself, they understood how it fit into the broader landscape.”

Prior to donating what is now the Bridgestone Nature Reserve at Chestnut Mountain to TNC, the company transferred 10,000 acres to the State of Tennessee. TNC’s Reserve connects with that property, called Bridgestone/Firestone Centennial Wildlife Management Area, to form part of a mosaic of more than 70,000 acres of protected public lands that include Virgin Falls State Natural Area, Fall Creek Falls State Park and Bledsoe State Forest.

And that’s not all. This partnership continues and reaches beyond Tennessee to TNC projects in other states where Bridgestone Americas has an on-the-ground presence. For example, in South Carolina Bridgestone Americas is supporting efforts by TNC and Clemson University to measure carbon sequestration at a 16,000-acre property that contains significant mature longleaf pine forest. This data, in conjunction with other studies, will advance understanding about longleaf pine’s ability to reduce carbon and other pollution in the atmosphere.



We can’t conserve nature without your support.

Please consider making a donation today to ensure that we can direct resources to our highest priorities in Tennessee.

Visit nature.org/tngiving or contact Britt Moses (britt.moses@tnc.org) for more information.

The Nature Conservancy 



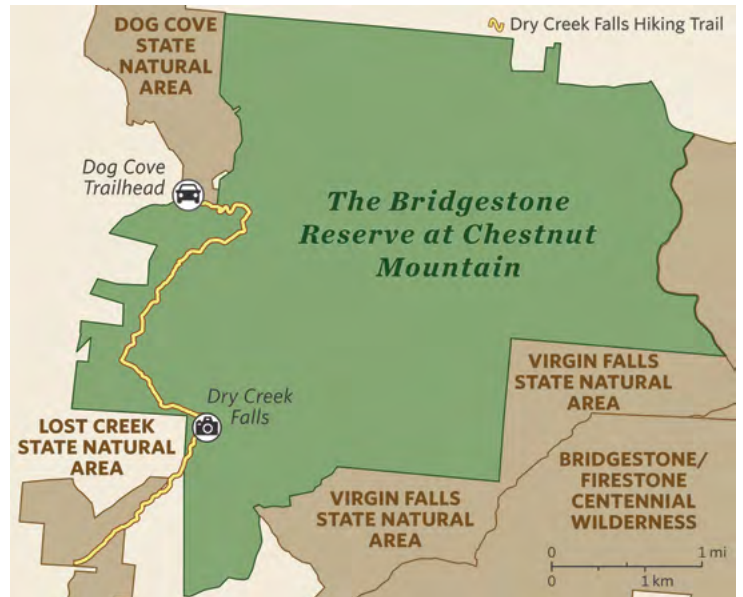
The Nature Conservancy in Tennessee
 2 Maryland Farms
 Suite 150
 Brentwood, TN 37027

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Visit Chestnut Mountain!

Visitors can access the Dry Creek Falls Trail at the Dog Cove State Natural Area parking area. The approximately 3.5 mile (each way) trail connects the Dog Cove and Virgin Falls state natural areas and ends at the scenic Dry Creek Falls. Along the way, hikers travel through cove forests dotted with enormous sandstone boulders and ephemeral streams, and native eastern hemlock forests. During springtime, the trail features wildflowers such as trillium, trout lilies and larkspur.