SHENANDOAH VALLEY CONSERVANCY
CELEBRATING 35 YEARS
WINTER 2025

Field Notes

Conservation Spotlight

A Haven for Biodiversity

Thousands of species call the Shenandoah Valley home, and it's our job to make sure high-quality, connected habitat is available for them to thrive. Essential to this goal is preserving the forests, fields, clean water, and landscape connections these species rely on to complete their life cycles.

Thanks to grants from the National Fish and Wildlife Foundation and The Nature Conservancy, and a partnership with the Virginia Outdoors Foundation, we were able to conserve a 788-acre site that protects biodiversity, critical habitat, and important landscape-scale connections. A haven of diversity, this now-conserved property contains multiple natural heritage resources, including Virginia's largest and best example of a globally vulnerable and state-imperiled plant species; two and a half miles of designated Brook Trout stream; prime habitat for the golden-winged warbler; a globally imperiled seepage swamp community; and headwaters that are a state-recognized conservation site. The site's 650 acres of forest with "outstanding" conservation value and unique 100-acre wetland complex create abundant habitat for numerous plant and animal species. This property sits in the core of the Buffalo Creek–Purgatory Mountain wildlife corridor and is adjacent to protected land. Its conservation now guarantees uninterrupted access for wildlife movement across high-quality, connected, and resilient aquatic and terrestrial habitats in perpetuity.

This easement is one of many that help conserve biodiversity and connected habitat in the Buffalo Creek–Purgatory Mountain wildlife corridor. Through the National Fish and Wildlife Foundation grant, we protected another 400 acres of high-quality, connected habitat this year, and we aim to protect an additional 1,000 acres by the end of 2026. The Shenandoah Valley and surrounding Highlands are globally important, and projects like these ensure the connections and habitat that support our incredible biodiversity will persist for generations to come.

People Behind the Places: An Interview with John Rice

What role do you play in the Shenandoah Valley Conservancy?

I am on the board and the Executive Committee, and I am probably the one who pushes the wildlife corridor thing the most at the Conservancy, and I did most of the mapping for our corridors. I've been a longtime member of the Conservancy, back almost 30 years ago, when it was Valley Conservation Council. I've also been in the conservation easement game myself—I worked for Piedmont Environmental Council back in the early 2000s, doing easement promotion work on the east side of the Blue Ridge. My wife did land trust work too for almost all of her career. So, I'm sort of immersed in it.

How did you first become interested in wildlife?

As far back as I can remember, I was intrigued by wildlife and the woods and wild country—the wilder the better—and the blank spots on the map, which we kind of had way back when. There were always maps, but it was harder to get specific information back then. It's so easy to know anything now with a little research, so I guess things were arguably more intriguing in a way because you had to figure it out for yourself. I've always been interested in hunting, fishing, hiking, camping, rivers... I used to do a lot of paddling; I had a canoe before I had a car. It was a great way to explore the state—I loved the mountains and wandering in them.

What prompted you to map wildlife corridors in the Valley?

I was always really into scouring maps and then scouting on the ground—in fact, I still have some of the old local national forest maps. I went to JMU, and being in the Valley and surrounded by the mountains with their wild country really drew me in. I got involved later in life with some folks doing wilderness protection and was an officer with the Virginia Wilderness Committee. Wildlife corridor protection work began to gain interest in the 1990s and really started with the early conservation biologists and their focus on protecting core habitats and connection areas linking them (corridors), and large carnivores as keystone species in keeping ecosystems balanced. As development progressed in Virginia, areas of previously connected lands were being split up, and the construction of interstates like I-81 created wildlife death zones and barriers to free movement of critters due to the sheer amount of traffic.

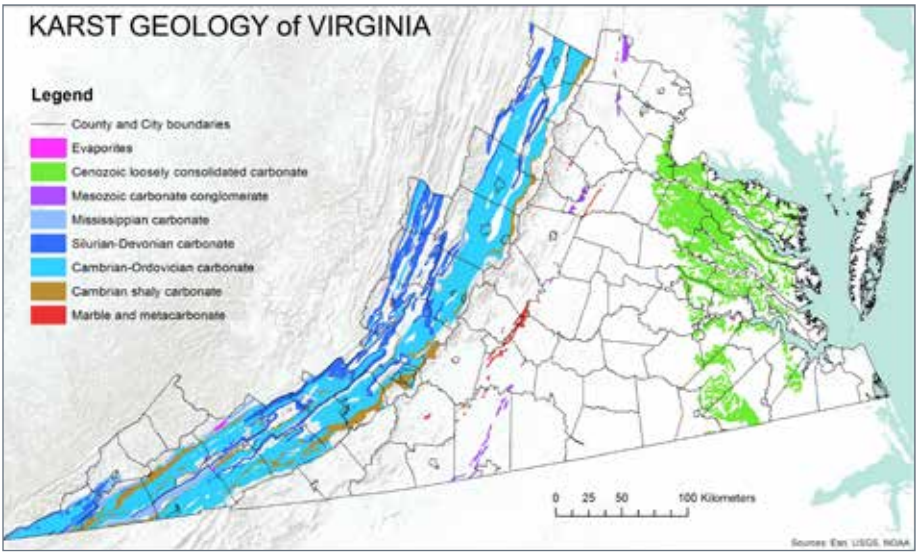
"As far back as I can remember, I was intrigued by the woods, wild country—the wilder the better..."

What framework do you use to identify priority corridors?

Mapping the corridors starts with identifying the existing protected "core" habitats, like USFS and National Parks, protected state lands, and clusters of conservation easements on private lands. You then look at where there are gaps of unprotected private lands between those protected public lands. The mapping then flows from an analysis of private land fragmentation and development versus places where wildlife habitat is still relatively intact within the potential corridor areas. We then reach out to landowners to see if they would be interested in protecting those at-risk connective habitats. From all my map study, I could see where the gaps or choke points were for wildlife movement—I could see where the threatened areas were between large, protected habitats associated with the national forests, parks, etc.

Where do you see wildlife corridor protection work heading?

I am greatly encouraged that there is so much interest in wildlife corridor protection in Virginia now, but there is going to be a struggle to prioritize corridor areas for scarce protection dollars. My orientation for prioritizing wildlife corridors for protection is that we should focus on locations that offer big-scale, like mid-Atlantic-scale, significance first, that is, those functionally intact wildland-to-wildland connective areas, as many species require the ability to move between large, protected core habitat areas in order to maintain long-term genetic viability. Fortunately, the Conservancy's service area includes several corridor locations that offer regional-scale importance, and I'm very pleased that we are actively and successfully working to protect those places.



Understanding the Underground: The Importance of Karst in the Shenandoah Valley

Karst landscapes are extremely valuable natural ecosystems and are also highly prevalent within the Shenandoah Valley, with our service area almost perfectly overlapping a large part of Virginia's karst geology. Over the past ten million years, the underground dissolution of limestone bedrock from acidic water has created topographic depressions in the Valley, forming karst, which includes features such as sinkholes, springs, sinking streams, and caves.

Karst landscapes hold 40% of the groundwater in the United States, an essential source of our water supply. They contain underground streams and aquifers, which supply communities throughout the Valley with clean drinking water through wells and springs. Karst terrain is hollow with high levels of porosity, allowing for surface water to easily enter the underground aquifer and bypass the natural filtration process of soil. The water can then travel far at an exceptionally fast rate—up to several miles a day. Without the awareness and conservation of karst landscapes within the Shenandoah Valley's watersheds, pollutants can easily enter our groundwater supply from issues such as soil erosion, overgrazing, agricultural and urban stormwater runoff, high-density development, and improper waste disposal.

Wildlife found in caves supports one another through a unique,

underground ecosystem despite darkness and lack of nutrients. Bats in Virginia rely on caves for hibernation in the winter, and wildlife such as salamanders, frogs, insects, and more live in the subterranean biome. Rare biodiversity is found within the limestone-loving Valley—the Madison Isopod is an incredible testament to the Valley's history, having survived millions of years in underground pools. Water moving underground deposits minerals and creates cave formations, including stalagmites and stalactites, which grow at only a few millimeters per year. These formations are incredibly fragile and showcase the intricate beauty of the subterranean.

The saying "out of sight, out of mind" can be associated with the vast subterranean world below us. Our work at the Shenandoah Valley Conservancy aims to change that notion by shining light on the necessary education and conservation work required to help preserve our Valley's prevalent karst landscapes that provide us with so much.

The Nature of Conservation

Little Brown Bat

The Little Brown Bat *(Myotis lucifugus)* is native to the Shenandoah Valley and is federally endangered. These small bats have a wingspan of about ten inches, and their brown fur pairs well with their tiny mouse-like ears. White-nose syndrome, a deadly fungal disease, has decimated over 90% of the population in recent years, and habitat loss as well as climate change add to this pressure. The Little Brown Bat plays an important role in our ecosystem, adding to Virginia's native biodiversity while also controlling insect populations. Weighing less than one ounce, this tiny but mighty mammal can eat up to 600 mosquitoes in one hour using echolocation; farmers rely on bats such as the Little Brown Bat as a natural defense against outbreaks of non-native insects, which can decimate agricultural crops. Little Brown Bats hibernate in caves over the winter and in the summer will roost in natural or man-made dwellings.

Unearthing Hidden History Through Native Plants: A Walk with Ruby Daniels in Zenda

Written by Aaron Kershaw & reported by Lauren Philp,
both with the Virginia Native Plant Society

On a warm Saturday morning in June, native plant enthusiasts and history buffs gathered at Long's Chapel in what was known as Zenda, north of Harrisonburg, Virginia, for an unforgettable experience: *Doctor's Orders: Black Heritage/Native Plant Walk*. Organized by the Shenandoah Valley Conservancy in partnership with the Shenandoah Valley Black Heritage Project and guided by "Affrilachian" herbalist and forest farmer Ruby Daniels, the event opened a window into the rich, often-overlooked world of African American ethnobotany and resilience.

Zenda, a historic African American community, served as the perfect backdrop for a walk that blended native plant knowledge with stories of survival, resistance, and deep-rooted wisdom passed down through generations.

Daniels, founder of Creasy Jane's Herbal Remedies, brought far more than just expertise in medicinal plants—she brought lived experience, ancestral memory, and an unwavering reverence for the land. As attendees wandered through fields and forest edges, Daniels pointed out familiar plants with unfamiliar histories. Plantain, white oak, and black walnut—all became portals into the lives of enslaved Africans and their descendants, who used plants not only to heal bodies but to quietly assert autonomy in a world of oppression.

"I feel like the African American superpower is working with the scraps we're given," Daniels told the group. "So, I like to work with what's in my area because I am a big conservation person."

Her words resonated deeply with those present, many of whom were native plant enthusiasts unfamiliar with this cultural layer of plant use. Ruby spoke of

how enslaved people were punished—even killed—for using foraged roots or herbs, forcing them to hide their practices in plain sight by turning to bark or inconspicuous weeds.

She described how medicinal plants have a way of showing up when and where they're needed. "In Baltimore City, I just kept seeing large amounts of passionflower... A good plant for withdrawing from opiates." Daniels continued, "I have elecampane growing in my yard. Well, my husband was diagnosed with COPD. So, huh? Those plants come up because they know that someone in that vicinity needs that medicine."

Daniels' connection to land and lineage came alive in stories of her family homesteading in West Virginia, of reading slave narratives and finding confirmation of her own lived experience—not through textbooks, but in the soil, the bark, and the leaves.

Attendee and Virginia Native Plant Society member Lauren Philp remarked that the walk made an impact that was more than educational. "Gardening supports my emotional health, and I am leaving this walk feeling a deeper connection to the earth and more curious about how native plants can support my physical health as well," Philp said.

Through humor, wisdom, and herbal samples, Daniels painted a picture of a people who turned adversity into

ingenuity—growing their own remedies, carrying roots in their pockets for protection, and using "five-finger grass" (cinquefoil) to bring money through their hands.

The event also served as a gentle but powerful call to action. Daniels urged participants to respect the land and the plants that sustain us. "If you're going into the woods and taking the plants away, then there's nothing for your children to see, your great-grandchildren to see. I always say: grow your own stash."

By the walk's end, it was clear this wasn't just a field trip. It was a living history lesson—a weaving together of botany and Black heritage, science and spirit. And for those fortunate enough to walk alongside Ruby Daniels that day, the plants of Zenda now speak in new ways.

For more information about native plants and events like this, visit **vnps.org**

For more information about the Shenandoah Valley Black Heritage Project, visit **valleyblackheritage.org**

SHENANDOAH VALLEY CONSERVANCY
CELEBRATING 35 YEARS

PO Box 190
Harrisonburg, VA 22803

Board of Directors

Steuart Thomas
Board Chair

Katie Wallace
Vice Chair

Kirk Billingsley
Treasurer

Scott Kelly
Secretary

Kathy Cline

Abbie Cutter

Lisa Hawkins

Beth Leffel

Tom Lockhart

Alex Moore

Sally Newkirk

John Rice

Conservancy Team

Peter Hujik
Executive Director

Rosemary Downing Director of Conservation

Karen Inouye
Stewardship Specialist

Mia Calvert
Conservation Manager

Ann Richman
Conservation Manager

Tanya Bickerstaff
Operations Manager

Amanda Gookin
Communications Manager

25 N. Liberty St., Harrisonburg, VA 22802 | 540-886-3541
info@Shenandoah.org

Join us in our effort to ensure our working farms, forests, and waterways remain agriculturally, ecologically, and recreationally vibrant.