

# Looking at Today's Ecology Through a Prehistoric Lens — Jeremy Stout

A feeling shared by many visitors to the Roan Highlands is that of *otherworldliness*, a sense that you've somehow been transported to a land much farther away than the couple dozen or so miles from the base of the mountain. Indeed, even a cursory look into the natural history of the high elevation

regions of the Appalachians yields an understanding that those areas have more in common in many ways with Canada than with the remainder of Tennessee.

A reader interested in the Roan's hodgepodge of northern and southern organisms would quickly learn of the advancing and retreating glaciers from the last Ice Age ending about 12,000 years ago and how changes in elevation achieve the same effect as changes in latitude. These southern high spots offered coldweather species refuge while the lower areas were invaded by warmer-adapted taxa.

The story is a great deal more complex than that, however, and the last Ice Age is only the recent past. A

closer look reveals ecosystems that share commonalities with those of Central America, Europe, and Asia and stretching as far back as the Mesozoic Era and beyond. Indeed the Southern Appalachians can be thought of as an island being shaped by biological and geological forces going back hundreds of millions of years.

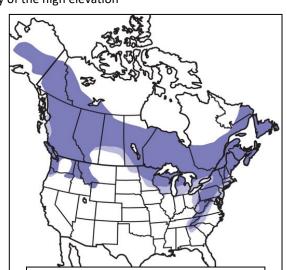
But perhaps the most intriguing part of the story is set in the modern-day, specifically, the role of past influences on today's landscape. Though the continents have moved and megafauna have mostly gone, the Southern Appalachians still occupy a liminal place in both space and time where otherwise disjunct groups of plants and animals meet or overlap in range. Surviving organisms from ancient biotas can still be found thriving in the region and ghosts of species-past still haunt the woods and meadows (if one knows where to look for them)!

And therein lies a missed opportunity surrounding much of the thinking about modern ecology: paleontology is too often relegated to the sidelines of science, a mere curiosity and not afforded its rightful place: fundamental to understanding the how and why of things now. Earth history provides the context for all living systems today!

Better understanding not only of where we are, but of where we have been, will help us identify missing taxa from the ecosystems, have a fuller understanding of native and nonnative species, and perhaps most importantly, forecast future distributions (such as with the role of climatic shifts and its effects on various taxonomic groups).

You can learn much more at the talk, "A Prehistoric Perspective on Southern Appalachian Ecology" on Friday, April 26<sup>th</sup> at

7:30 pm at the park conference center. Then, at 9:00 pm, Jeremy will lead an easy night hike into the woods in search of nocturnal critters and, if it's clear, spring constellations. On Saturday April 27<sup>th</sup> at 8:30 am, there will be a moderately strenuous (5 mile) hike to Grassy Ridge focusing on the High Roan's unique geology and its role on modern flora and fauna.



How often have you seen a species range map that looks like this? Many naturalists have grown so accustomed to seeing the "tail" down the Appalachians that they forget to ask how and why it is there to begin with!

Jeremy Stout is a paleontologist and manager of the Nature Center at Steele Creek Park in Bristol, Tennessee and is an adjunct professor of Biology at Northeast State Community College.

#### Walking and Reading with Daniel, Thoreau, and ...

Many years ago, I undertook a walking tour of Vermont. I began my trip at Vermont's northern border with Quebec, and my goal was to hike the length of the state on its famed Long Trail. I was young; it was summer. One evening as I neared the rocky terrain of Smuggler's Notch, I heard footfalls fast approaching. Soon, a figure came into view. He was walking hard down the trail toward me. His head was bent low as he intently inspected a flower held in his right hand. As he drew closer and called out "hello," I slowed my pace. What followed was one of the most curious encounters of my life.



The young man in front of me looked like a nineteenth century circus performer. He wore a houndstooth, three-piece suit, which was cropped into shorts at the knee, and instead of hiking boots he donned leather boat shoes that had been cut and modified into something akin to Roman legionary sandals. His straw hat was jaunted at an angle across his head, and his eyes were beaming. He smiled and introduced himself as Daniel.

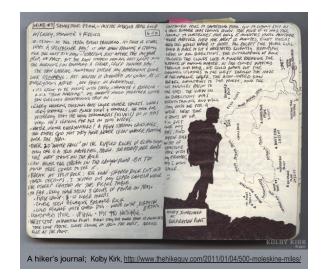
As we walked, Daniel confided that he had started hiking months ago in Michigan, and his goal was to reach Maine by September where he was to enroll as a botany student at Bowdoin College. He claimed that he traveled

cross country and simply "took a left" when he stumbled upon the Long Trail; he had hoped to find interesting flora to examine. What impressed me most about Daniel was not that he was a long-distance walker. I was most intrigued by his pedestrian way of seeing, of living, of participating in the natural world. I had always walked on trails, following paths laid out before me. Ensconced between two trailheads, there were defined beginnings and endings to my walks. Daniel, though, was a different sort of traveler. He let the landscape dictate his heels. He followed the folds of the land like one who was neither constrained by time nor possessions, but instead he seemed fueled by an obscure motivation that drove him to take the long, slow way. At camp Daniel shared with me his walker's journals – he carried four of them. These pages were filled with the minutiae of his observations. Just as Daniel walked through the American landscape, the wilds of America walked through his words. From the state flower of Ohio, the red carnation, to a black bear he witnessed along the Susquehanna River in Pennsylvania, Daniel's notebooks cataloged and commented on an America seen at three miles an hour.

I spent the afternoon reading his words and listening to him explain the intricacies of white pine seed pollination. Daniel's descriptions of the forests and his close perceptions seemed to be based solely on his mode of travel – walking. By walking through America's varied terrains, Daniel's travel to Maine seemed to

transform from mere transportation into a pilgrimage. By slowing down his travel, he was speeding up his skills of viewing and corresponding with nature. Years later, I came to view him as an heir to the tradition of Henry David Thoreau's walker or saunterer, as Daniel seemed to answer Thoreau's call for walkers to "naturally go to the fields and woods."

Thoreau, America's foremost literary walker, solidified his love of a jaunt in the essay "Walking." The text urges its readers to enter into and through nature propelled only by their legs. Each experience afoot in the outdoors should suggest a journey to higher truth or more authentic living. Thoreau's practice of taking daily walks is well known, and his essays that expose his love of pedestrianism remain popular. In spite of Thoreau's fame as a walker, his works, however



crucial, are not alone in their praise of and meditation on walking. During the nineteenth century, the fusion of walking and writing permeated American literature. Invariably, many American writers accepted both Thoreau's invitation to walk out into the American landscape and to describe and reflect upon their communities as well as the country at large. The literature of walking and observing nature while afoot is a varied yet little studied sub-genre in American letters, and the personalities who wrote about walking, and their motivations for taking to foot, are more diverse than perhaps suspected.

Here in the twenty-first century, some of the most notable kindred spirits of Thoreau

WENT TO THE WOODS BECAUSE LIVE DELIBERATEL FACTS OF AND SEE IF I COULD NOT LEARN WHAT IT HAD TO TEACH WHEN I CAME TO DIE, THAT I HAD NOT LIVED! THOREAU

are the hardy folks who walk north every spring – and those who start in the north during summer – along the Appalachian Trail. Unlike Daniel's meanderings, these walkers follow trail blazes as they reenact the first great tour completed by Earl Shaffer in 1948. Like Shaffer himself, many of these walkers keep journals and later publish their experiences about hiking the AT. Filled with their motivations for attempting to finish it and their sights and adventures along the way, AT literature has found a reliable audience. Over the past thirty years, scores of these accounts have been made available for would-be hikers to read. From the Bill Bryson's bestselling A Walk in the Woods (1998) to more obscure self-published accounts, AT literature as proven to be perennially popular. The ghosts of both Thoreau and Daniel haunt trail literature, and as long there are walkers who desire to ramble in the mountains for months, there will be those of us who dream of joining them and love to share in their steps.

Scott Honeycutt, Associate Professor of English at ETSU, holds a PhD in American literature. His research interests include nineteenth century nature writing, walking literature, poetry, and young adult literature. Scott will present Crossing the Hills --The Literature of the Appalachian Trail on Saturday, April 27, 7:30 p.m. at the Roan Mountain State Park Conference Center.

#### GIFTS AND MEMORIALS

Friends of Roan Mountain gratefully acknowledges these charitable donations **Donations** 

Lynn Brown Richard & Vicki McGowan Norma Morrison (via Network for Good) Christine Oetjen Dan & Rosalie Russo

#### Twin Springs Project

Frank Shattuck

**Southern Appalachian** Highlands Conservancy is

partnering with the Appalachian Trail Conservancy, Roan Mountain State Park, and the Cherokee National Forest to remove invasive garlic mustard from the park and heavily trafficked highways around Carver's Gap



and SAHC conservation properties in the Highlands of Roan. Plucking out the pesky invaders when they're young and tender isn't hard work, but it does take a lot of hands!

**Location:** Meet at the Conference Center Parking Lot – Roan Mountain State Park in Roan Mountain, TN

Date: Friday, April 26th Start time: 9:30 am

Details available at appalachian.org/event

### Montane Metameric Monsters: The Unique Centipedes of the Southern Appalachian Highlands

—Cade Campbell



Left to Right: *Brachoria hendrixsoni*, a millipede endemic to the Roan Mountain area, *Hemiscolopendra marginata*, a Southeastern centipede species found in the Appalachian highlands, and the centipede, *Theatops posticus*, guarding a brood of its protonymph offspring.

Both centipedes and millipedes can be seen throughout the Appalachians year-round. Millipedes are more frequently encountered, and many very showy species with amazing life histories exist in the Appalachians, and can be seen in great numbers during the spring and summer as they crawl across the leaf litter on moist days. Often toxic on the inside, they cannot cause any harm even when handled (only when eaten) and peacefully feed on organic matter and detritus in the soil.

Aside from having segmented bodies covered in legs, these two organisms pursue lifestyles which might as well be polar opposites. While millipedes are some of the most placid creatures found in Eastern North America, centipedes could be thought of as the most violent as predators. In fact, their whole livelihood hinges around their aggressive pursuit of prey. Centipedes are venomous, as opposed to poisonous millipedes, and as a result, they can inflict a painful bite with venomous, modified legs known as forcipules. These modified legs are highly maneuverable, and coupled with maxillae situated under the head, allow centipedes to completely eat the most resilient creatures. Effortlessly, centipedes can even crunch their way through the elytra of beetles and the bones of small vertebrates. A fossorial order of "bugs," Chilopods (centipedes) are able to hunt prey by using highly sensitive antennae and very primitive eye-like structures called ocelli. These anatomical weapons allow them to hunt in dark burrows under the soil, and their flexibility and strength makes them a force to be reckoned with even among prey larger than themselves. "Centi-" means one hundred, and "milli-" means one thousand, however, this does not accurately depict the number of legs each of these creatures has. Centipedes can have anywhere from thirty to several hundred legs, depending on the species, and millipedes follow a similar range.

Despite the fact that they have not gained the popularity of their relatives, Appalachian centipedes are hardly insignificant or "boring." We have one (potentially two in the lowlands) species of "giant centipede" here. Giant centipedes (Scolopendridae) can easily grow over 10" in length, and although no Appalachian centipede grows that large, we do have several representatives of the group. The Florida Blue Centipede, *Hemiscolopendra marginata*, is known to grow over three inches long at surprisingly high elevations, which is not a terrific feat compared to several other species which can grow even larger, but coupled with this centipede's arrays of blue, green and red, this species is certainly a highlight of the centipedes in the Appalachians. Its distribution is unique, following the Southeastern coastal plain; branching of into the Appalachians and the Valley-and-Ridge into Kentucky, at least.

The mountain-endemic *Theatops spinicaudus*, or "Spiny-tailed Forceps Centipede," has hunting strategies quite different from those of other native centipedes. In addition to forcipules mounted under the head, T. spinicaudus also has modified rear legs that act like a pair of sharp forceps to wrangle prey that could easily overpower them without the aid of such legs. Theatops lack any sort of eyes, and since they are only capable of responding to light, they remain under the cover of deeply-buried rocks and logs in moist, loamy forest soil. In fact, these light orange centipedes are some of the largest in Eastern North America. Some local centipedes are specialized feeders. One of our area's more charismatic soil centipedes (a group of smaller species), *Strigamia bothriopus*, or the "Pin-headed Centipede," is bright, fire-truck red and loves to eat snails. It has a round, muscular body which it can use to wrench its tiny head into the aperture of land snail shells in order to feed on the juicy mollusk inside.

One factor contributing to their little-known life history is elusive nature of centipedes. It almost seems as if centipedes are attempting to be as solitary as possible. Centipedes either fight with or flee from other creatures on sight. Predators, prey and even centipedes of the same species are all avoided by an individual centipede. Centipedes will not even directly interact to reproduce. To breed, a male centipede will leave a nutrient-enriched spermatophore in a small web when a female is sensed nearby. Then, he will flee as quickly as possible from the area in order to avoid a frequently unsuccessful encounter, and fight, with his unseen mate who will pick up the spermatophore when and if she finds it.

Despite the solitude of even their mating rituals, centipedes are remarkably social in one, and only one, aspect of their life history. Many taxa of centipedes actually supervise the hatching of their own eggs and actively rear their young. Soil centipedes, Florida blue centipedes and forceps centipedes, along with many others, will defend their young from predators, fungal growth and parasites. Young centipedes will disperse when mature and become highly lethal predators over their lifespan of often a few decades.

Centipedes, although they are ferocious and strange, are still very worthy subjects of study within the Appalachian Mountains. The lack of knowledge that envelops these wondrously bizarre animals makes them all the more fun to chase across the backcountry. Every loose fragment of birchbark could be housing a species that hasn't been recorded for over thirty years. If you want to see some of these living oddities, and their equally (if not more, at least locally) fascinating relatives, all you have to do is go out into the forest and flip some logs. Just make sure to roll them back when you're done looking at their inhabitants!

#### Sources:

Cloudsley-Thompson, J. L. "Spiders, Scorpions, Centipedes and Mites: The Ecology and Natural History of Woodlice, Myriapods, and Arachnids." Pergamon Press. 1958.

DeSisto, Joseph. "A First Survey of the Centipedes of Great Smoky Mountains National Park." *UCONN Library.* 2014. <a href="https://opencommons.uconn.edu/cgi/viewcontent.cgi?referer=&httpsredir=1&article=1016&context=srhonors\_holster">https://opencommons.uconn.edu/cgi/viewcontent.cgi?referer=&httpsredir=1&article=1016&context=srhonors\_holster</a>
Hoffman, Richard L. "The Centipeds (Chilopoda) of Virginia: A First List." *Banisteria*, Number 5. 1995. <a href="https://virginianaturalhistorysociety.com/banisteria/pdf-files/ban5/Banisteria5">https://virginianaturalhistorysociety.com/banisteria/pdf-files/ban5/Banisteria5</a> Hoffman Centipeds%20of%20VA.pdf

Cade Campbell is a Tennessee Volunteer Naturalist, a Virginia Master Naturalist, a Boy Scout working toward Eagle Rank, an Exchange Place Junior Apprentice (or Living History Interpreter), a junior in high school and a rally field trip leader for our Naturalist Rallies.

**THE 2019 WINTER FALLY** at Roan Mountain State Park on February 9<sup>th</sup> welcomed more than 85 attendees to the indoor presentations and post-lunch hikes. The three morning lectures focused on an array of subjects, including recent salamander research in and around the state park, ongoing efforts to capture the natural spectacle of the North Carolina state park system in sketches and paintings, and an overview of management issues related to the burgeoning black bear population in Tennessee. During the lunchtime presentations, attendees heard about recent vascular plant research on Roan Mountain and received an overview of the various projects that Friends of Roan Mountain has been involved with over this past year.

Following a delicious catered lunch, attendees enjoyed a variety of fun hikes in the state park and at the nearby Hampton Creek Cove Natural Area.

Details of the lectures and presenters can be found below, and PDF copies of a sample of the PowerPoint presentations can be downloaded at the following link: <a href="https://app.box.com/folder/71196890994">https://app.box.com/folder/71196890994</a>

Tyler Wicks (Biology undergraduate student, East Tennessee State University): *Where are they hiding?*A survey of rare Appalachian salamanders

Robert Johnson (Artist, Celo, NC): Painting North Carolina State Parks

Dan Gibbs (Black Bear Program Leader, Tennessee Wildlife Resources Agency): What do we do about all these Bears? Black Bears in Tennessee: Their History, Current Status and Future

Jamey Donaldson (John C. Warden Herbarium Adjunct Curator, East Tennessee State University): *There and back again: a hobble tale* 

Gary Barrigar (President, Friends of Roan Mountain): 2018 Friends of Roan Mountain Projects

### 'oking around with Heath Ledges along the Raven Rock Trail 0.75 mile + 0.3 mile Forest Road Trail for loop opportunity

Jamey Donaldson reporting, Feb. 2019 (Updated April 2020, adding Flame Azalea)

My favorite part of the Raven Rock Trail in Roan Mountain State Park is the 300 feet elevation climb from the campground trail head to the Raven Rock Vista, with its expansive views of the Doe River, Strawberry Mountain, Heaton Ridge, and park facilities. You can also see all 5 of the locally native oak species (2 others are planted in the park outside of their natural ranges: Willow Oak (*Quercus phellos*) and Southern Red Oak (*Q. falcata*)) and at least 12 members of the Heath Family (Ericaceae), about half of the 23 Heaths known from the Roan Massif, but you may need to hike the full loop to see them right beside the trail. The steep slope amplifies the moisture and sunlight gradients from the Doe River to the top of Heaton Ridge shown in this generalized top-to-bottom list:



#### **HEATON RIDGE Higher = Hotter & Drier**

#### **OAKS**

Scarlet Oak (Q. coccinea)

Chestnut Oak (Q. montana)

Black Oak (Q. velutina)\*

Red Oak (Q. rubra)\*\*

White Oak (*Q. alba*)

#### **HEATHS**

Trailing Arbutus (*Epigaea repens*)

Black Huckleberry (Gaylussacia baccata)

Lowbush / Hillside Blueberry (Vaccinium pallidum)

Mountain Fetterbush ( $Eubotrvs\ recurvus = Leucothoe\ r$ .)

Teaberry (Gaultheria procumbens)

Northern Maleberry / He-huckleberry (Lyonia ligustrina v. l.)

Mountain Laurel = Ivy (*Kalmia latifolia*)

Sourwood (Oxydendrum arboreum)\*\*

Flame Azalea (Rhododendron calendulaceum)

Pinesap (Hypopitys monotropa = Monotropa hypopithys)

Striped Wintergreen / Pipsissewa (Chimaphila maculata)

Rhododendron / Great Laurel (Rhododendron maximum)

#### **DOE RIVER = Moister & Shadier**

You'll know you are near the Raven Rock Vista when you start seeing abundant Mountain Fetterbush.

\*Our Black Oak is *Q. velutina*, not *Q. nigra* (Water Oak), so maybe we should call it the Velvet Oak?

\*\*Red Oak, like Red Maple and Sourwood and many others, really gets around, lots of different elevation, exposure, moisture, and soil types.

Pinesap is the only Heath herb listed above, the rest are woody including the dwarf shrubs Striped Wintergreen, Teaberry, and Trailing Arbutus. Others possible based on habitat include a Highbush Blueberry (*V. corymbosum* or *V. simulatum*), Appalachian Deerberry (*V. stamineum* var. 2), Flame Azalea (*R. calendulaceum*), Catawba Rhododendron (*R. catawbiense*), and Indian Pipes (*Monotropa uniflora*), but summer surveys are needed for these.

Heaths known from high on the mountain are Sand-myrtle (*Kalmia buxifolia*), Mini-bush (*Menziesia pilosa*), Gorge Rhododendron (*R. minus*), Blue Ridge Blueberry (*V. altomontanum*) and Highbush Cranberry (*V. erythrocarpum*). And don't forget the town of Cranberry, NC, named for the Large Cranberry (*V. macrocarpon*) found along Cranberry Creek.

The lower portions along the Forest Road Trail fit Southern Appalachian Acid Cove Forest (Typic Type) with abundant Tuliptree (*Liriodendron tulipifera*) and lesser amounts of Sweet Birch (*Betula lenta*), Yellow Birch (*B. alleghaniensis*), American Holly (*Ilex opaca*), Red Maple (*Acer rubrum*), and what's left of the Eastern Hemlocks (*Tsuga canadensis*), over a Rhododendron / Great Laurel shrub layer and not many herbaceous plants.



François André Michaux (book author), Henri-Joseph Redouté (illustrator), Gabriel (engraver) [Public domain]



## How does it feel to climb a mountain? . . . GREAT!

Yes. You can climb a mountain. And hunt for salamanders. And capture aquatic insects. Or any of the twenty other Adventures at the Xtreme Roan Adventures

The purpose of the Xtreme Roan Adventures (kid's nature day) is to get more kids (ages from 4 to 16) outdoors, so they can experience as much nature as possible in one day.

How Xtreme are the Adventures? On the Wet & Wild Stream Ecology Adventure the kids will actually get in the Doe River. (Bring creek shoes) On the "climb a mountain" Adventure, the kids will hike to the top of Round Bald. (Top of the world views.)

Another great thing about the Xtreme Roan Adventures is we could call it a "family nature day". Parents must to go with the kids on the Adventures. One of the great things for me is seeing families return year after year. Many families make a weekend out of it. They camp for the weekend. (We offer free camping for Adventurers in the Group Camping area.)

The cutest thing I remember from last year is a little five-year old girl making a terrarium. She had been on the Millipede Adventure that morning. After lunch she was at the craft table making a terrarium. The moss she pulled from the tub of supplies contained a small millipede. She was very happy. She excitedly announced, "Oh look. A baby millipede!" I was as happy as she was. She was already using the things she had learned just that morning.

Who knows what experience the kids will remember from this year's Xtreme Roan Adventures?

Xtreme Roan Adventures - Friday evening and Saturday, July 26 – 27, 2019 Ken Turner (423) 538-3419

Ken@XtremeRoanAdventures.org or www.XtremeRoanAdventures.org





Due to a schedule conflict at the park, we had to make a change in the dates for this year's Fall Rally. **NEW DATES: August 30, 31 & Sept. 1, 2019.** 

This change applies to this year only. We apologize for any inconvenience this change may cause.

We are excited to announce the featured speakers for the Fall Rally.

Friday evening's program will be presented by filmmaker Ross Spears who will feature part of his new documentary film series, *The Truth About Trees*.

Saturday evening will feature a joint presentation by Kenn and Kimberly Kaufman, renowned birders and authors, who have dedicated their lives to education and conservation. Kimberly is Executive Director of the <a href="Black Swamp">Black Swamp</a> Bird Observatory. Kenn is the originator and editor of the <a href="Kaufman Field Guides">Kaufman Field Guides</a> series and has led birding tours on all 7 continents.

### ROAN MOUNTAIN STATE PARK HAPPENINGS

#### **Conservation Plots**



Roan Mountain State Park and the Friends of Roan Mountain (FORM) are partnering once again to make the park even more beautiful and scenic to drive through. The park is host to four wildflower and native grass conservation plots that many people can see growing alongside the highway while cruising through the park. These flower fields bloom through the late Spring, Summer, and Fall with brilliant colors that attract birds, butterflies, and other critters. This partnership will have rangers and volunteers working to rid the fields of unwanted weeds, adding new species of flowering plants while redistributing the old plants, and expanding their size so that wildlife will benefit better from these plots. The goal of this project will be to attract pollinators through the park and provide better habitat for wildlife that already lives around the area: turkey, grouse, songbirds, black bear, deer, pollinators like butterflies and native bees, and many small mammals. As you see these fields blooming to life with new color and energy, be sure to watch your speed as you make your way through this wildlife treasure trove.

#### **Highland Snorkeling**



Warm weather and summer break are just around the corner! This time of the year sings of trips to the beach and hikes along the cool mountains. When someone says "let's go snorkeling," thoughts of the Caribbean or the Gulf of Mexico come to mind. Roan Mountain is changing the snorkeling backdrop with their summer Doe River Snorkeling Expeditions. Keep your snorkeling adventures closer to hearth and home this year with ranger-guided splashes in the cool Doe River. Enjoy the river life as you've never seen it before through the lens of a snorkel mask. Watch as trout and dace zip by while you swim in place with schools of shiners and chubs. Bask in the sun after a cool dip under the water while turning over rocks for rare salamanders and crawdads. This summertime adventure will be offered starting late May and will run through August. Be sure to watch Roan Mountain State Park's website for your next adventure.



This spring, FORM will begin an exciting new cooperative project with Roan Mountain State Park. Our Board has approved a grant to the Park of \$1,000 to renovate and refresh the wildflower plantings along Route 143 in the Park. Some of the beds have become overrun with a few species that have crowded out other species and reduced the diversity that was intended for the beds. FORM volunteers will have the opportunity to selectively remove overpopulated species, eliminate weeds and saplings, and provide seed for new plantings. The project will restore a diversity of native wildflower species that will provide food and habitat for many birds, pollinators, butterflies, and others. Initial work will probably begin with the two beds closest to the Visitors Center.

In addition, FORM volunteers may assist in the development of educational signage, and possibly a brochure that will inform visitors about native wildflowers in our area and the roles they can play in our environment.

Park personnel are currently developing goals for the project, an implementation plan and guidelines within which FORM volunteers can work. There will be a "clean up" day on May 11<sup>th</sup> to begin to dig out plants needing to be removed -- details to follow. It is hoped that once the framework is in place, volunteers who have been given the project guidelines and particulars can work on their own when it is convenient, and report to designated park personnel to log FORM's volunteer hours.

We very much look forward to working with park staff on this important and fun project!

#### TWIN SPRINGS IS LOOKING GREAT!

—Gary Barrigar

Twin Springs Recreation Area was constructed adjacent to Highway 143 on Roan Mountain in the early sixties shortly after the highway was built. The Friends of Roan Mountain has a long history with Twin Springs. Over the years, many naturalists rally trips have taken place at Twin Springs as it is an excellent location to view wildflowers, birds and salmanders. Before the Conference Center at the park was built, rally participants would even meet there for lunch at each rally.

The U.S. Forest Service decided to close the Recreation Area in 2013, and the area fell into disrepair and became strewn with litter. In the fall of 2017 the Friends of Roan Mountain Board of Directors voted to partner with the U.S. Forest Service to adopt the Twin Springs Recreation Area on Roan Mountain. The Friends of Roan Mountain agreed to periodically remove litter, remove weeds from the parking lot, trails and picnic sites and maintain the picnic shelter. The Forest Service has agreed to make new signage, remove damaged tables and grills and remove downed and dead trees.

Since that time, the FoRM have held a number of workdays to maintain Twin Springs. On October 10 and 11, 2018, FoRM volunteers held joint work days with the Forest Service to replace the roof on the picnic shelter. We gratefully acknowledge Charles LaPorte of LaPorte Construction Co., Elizabethton, TN, who volunteered his services as the contractor for this project.



A hard-working crew of volunteers removed the old shingles and put on a new metal roof.



New signage is in place and the Recreation Area looks great! Our upcoming Spring Rally will offer a field trip, the Twin Springs Trifecta, featuring history, wildflowers and salamanders.

In anticipation of the rally, we plan to hold our next **work day on Saturday, April 20th**, at Twin Springs to remove litter, using weed trimmer, loopers, rakes, leaf blowers, etc., to clear around the sign, parking lot, picnic sites and trails. We will meet at 10 am at Twin Springs. Bring any appropriate tools. This work should only take a couple of hours. We hope you can make it!



New signs at Twin Springs Recreation Area



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#### Share The Roan — Consider a gift membership in FoRM

Click the Membership tab on our website at www.friendsofroanmtn.org or email aabernethy@friendsofroanmtn.org

Find us on the web at <a href="http://www.friendsofroanmtn.org/">http://www.friendsofroanmtn.org/</a>

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Deadline for Spring Rally Meal Orders - Payment for rally dinners and lunches must be received by Tuesday, April 23rd. The reservation form can be found in the brochure or on our website. Mail your check and reservation form to Nancy Barrigar, 708 Allen Avenue, Elizabethton, TN 37643.

You can now register online. Follow the link on our website's homepage.



Door Prizes -- We gladly accept items donated for door prizes. These will be given away on Friday and Saturday prior to the evening programs. Ideas: nature-related books, photos or art, outdoor gear, plants, homemade goodies . . .



Get the latest updates on FORM events and listen to interviews with Rally presenters and leaders on Roan Mountain Radio with Ken Turner. http://www.roanmountainradio.com/



MARK YOUR CALENDAR	Spring Rally	Last Friday - Sunday in April	April 26 - 28, 2019
	Youth - XRA	Last Friday—Saturday in July	July 26 - 27, 2019
	Fall Rally	Friday - Sunday in September before Labor Day	Aug 30 - Sept 1, 2019
	Winter Rally	Saturday in February near Valentine's Day	Feb. 8, 2020

If you prefer to read your FoRM newsletters online (color version) email nbarrigar@friendsofroanmtn.org with your request.