



## The Spring Naturalists Rally is cancelled, but spring goes on!

For 61 years nature enthusiasts have gathered at Roan Mountain to celebrate the beauty and biodiversity of Roan Mountain. We've rallied during sunshine and rain, warm weather and snow. Last spring we even carried on with our Friday evening dinner and program during an electricity outage. [Thank you Jeremy Stout for your adaptability and creativity!] For the first time in the history of our rallies, we've had to cancel a rally because, during this COVID-19 pandemic, the state parks are closed and we are safer at home. We are sad to miss seeing all of our friends and exploring Roan Mountain's treasures with our wonderful expert naturalists. But even though our human community must alter its social gatherings, the natural world continues its dependable cycle of seasons. The days grow longer and the earth warms. The spring ephemerals are blooming, the warblers are returning, the trees are leafing out ... And all of this is happening right outside your door. We hope you can step outside with a naturalists heart and take it in. Best wishes to each of you for a safe, healthy and wonder-filled spring!

## Such Singing in the Wild Branches

*It was spring  
and finally I heard him  
among the first leaves—  
then I saw him clutching the limb  
in an island of shade  
with his red-brown feathers  
all trim and neat for the new year.  
First, I stood still  
and thought of nothing.  
Then I began to listen.  
Then I was filled with gladness—  
and that's when it happened,  
when I seemed to float,  
to be, myself, a wing or a tree—  
and I began to understand  
what the bird was saying,  
and the sands in the glass  
stopped  
for a pure white moment  
while gravity sprinkled upward  
like rain, rising,  
and in fact  
it became difficult to tell just what it was that was singing—*



<https://www.flickr.com/photos/anitagould/>

*It was the thrush for sure, but it seemed  
not a single thrush, but himself, and all his brothers,  
and also the trees around them,  
as well as the gliding, long-tailed clouds  
in the perfectly blue sky— all, all of them  
were singing.  
And, of course, yes, so it seemed,  
so was I.  
Such soft and solemn and perfect music doesn't last  
for more than a few moments.  
It's one of those magical places wise people  
like to talk about.  
One of the things they say about it, that is true,  
is that, once you've been there,  
you're there forever.  
Listen, everyone has a chance.  
Is it spring, is it morning?  
Are there trees near you,  
and does your own soul need comforting?  
Quick, then— open the door and fly on your heavy feet;  
the song may already be drifting away.*

— Mary Oliver, "Such Singing in the Wild Branches"  
Owls and Other Fantasies: Poems and Essays, Beacon Press,  
Boston, 2003, pp. 8-9

# ***Explore Your Backyard World!***

Text and photos by Jeremy B. Stout,  
The Nature Center at Steele Creek Park



**It is easy to forget that our yards and neighborhoods contain thousands of species of plants, animals, fungi, and microorganisms!**

This is a strange, and in many ways unprecedented, time we find ourselves in. Despite being more technologically connected than ever before, the isolation brought about from canceled events, quarantine and “social distancing” is beginning to be felt in our communities. And now with many area parks and outdoor recreation venues closing indefinitely (including all of Tennessee State Parks), stir-craze is beginning to manifest in many households. But that shouldn’t deter us from exploring our natural world; in fact, maybe while we are distancing from many members of our own species, it might be time we reconnect with the biodiversity around us - and we don’t even have to leave our neighborhoods to do that!

When was the last time you took a nature hike around your yard or neighborhood? It’s easy to feel as though these spaces are mundane or too well-trodden. But take a closer look; shift your focus only slightly and an entire undiscovered world begins to emerge. Find out what birds are breeding around your home and what materials they construct their nests from. Roll over a log to discover what predators prey on the hard-shelled isopods, better known as “roly-polies”. Complex tales of ecological intrigue - growth, death, hunters, hunted, decomposition, and romance are all playing out on a massive scale in just a few square feet of space!

The current stay-at-home directive also makes for an excellent opportunity to acquaint yourself with wild edibles growing around the home. The spinach-like Broadleaf Plantain (*Plantago major*), White Clover



Redbud (*Cercis canadensis*) is an early favorite of many pollinators and nectar thieves (bumblebees are often too fat to enter to flowers' opening and create their own entrance through the back without collecting any pollen!). The flowers also make an excellent wild forage for us (they taste like raw green beans, but sweeter).

(*Trifolium repens*), and dandelions (*Taraxacum* spp.) are all abundant and make for excellent cooked greens. Redbud (*Cercis canadensis*) flowers (pictured) make an excellent snack raw while out on a walk. There are countless more, but of course, be sure to familiarize yourself with any species you consider eating to avoid accidental poisoning via misidentification. While panicked shoppers make hoarding runs on area grocery stores, you can stretch your supplies with greens, teas, and even baking flour, all from the yard!

A noble endeavor during the pandemic could also be to engage in backyard science projects. These could be as simple or as complex as you'd like to make them and offer a wonderful educational activity to do with kids stuck at home. Try keeping a weather journal or a notebook of what flowers are blooming and when (or both). Shine a black light on different species of flowers and take note of any changes you see (hint: many flowers contain ultraviolet colors which are

invisible to us but act as landing patterns for keener-eyed insects). You could even apply a little more rigor and engage in actual scientific investigations; with online resources like iNaturalist and the Cornell Lab of Ornithology, citizen science has never been more accessible.

It may sound cliché, but the only limit to your backyard adventure fun is your own imagination. A popular activity at past Xtreme Roan Adventures is the "100 Inch Hike", in which pre-kindergarteners learn that they are giants in their world and the program is spent laying on the grass and discovering the world "only" 100 inches long. Over that small space the keen observer will find dozens of plant and animal phyla representing hundreds of species. That's an especially pertinent lesson for adults too during this moment of collective solitude. There is infinity in every direction - sometimes we just have to adjust our gaze to see its wonder.



Domestic apple (*Malus* spp.) blossoms attract many bees and its leaves are the host plant for giant silk moths. Some plain-looking flowers hide secrets from us that the insects can see!

# “Play Me Some Mountain Music: Roan Mountain’s Invertebrate Orchestra”

— Cade Campbell

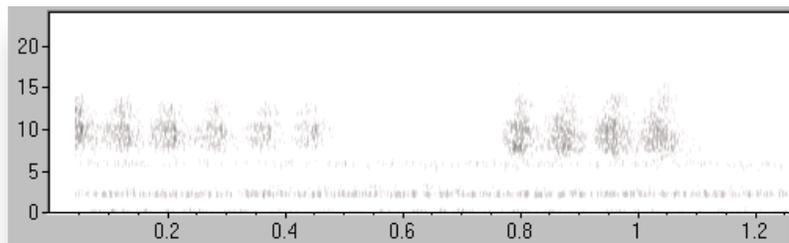


Lesser Angewing (*Microcentrum retinerve*)  
Roan Mountain State Park, 2018

During the summer months, the fields and forests of Roan Mountain are rich with a cacophony of insect songs. Harmonizing with the dirges of late-season birds, the tumbling ruffles of the Doe River and rustling, high-elevation zephyrs, singing insects are iconic throughout the Blue Ridge Mountains for their ecological, cultural and artistic contributions to our special places. Their beautiful songs have inspired and soothed the public for centuries, and continue to do so whenever someone walks out the door. However, each individual call heard reverberating through forest corridors or echoing from distant fields belongs to an individual insect. Each of these insects has an individual life history, a specific epithet and a complex role in its biome. Each species is as unique and traceable as a particular rock band’s music, and learning the songs of local insects can be very comforting. While it’s exhilarating to begin wondering who is singing in the woods all around you, it’s reassuring to know that you are surrounded by a host of cheerful, familiar voices while hiking or camping.

The Lesser Angewing (*Microcentrum retinerve*) is one of these “familiar voices.” Adept in the air, Lesser Angewing katydids can flutter through acres of canopy in a single night. Beginning in the late afternoon, male katydids often sing for a few hours (at least) after sunset in mild weather. Arboreal katydids typically feed on deciduous foliage, but they sometimes eat other insects and rotting fruit. Lesser Angewing katydids are also obligate leaf mimics, and greatly resemble elliptical leaves while singing or resting on the tips of slender branches. The male has a short, scratchy song composed of several high-pitched, silky rattles (mnemonic: “ts-ts-ts-ts”); agreeing with the louder, slower songs of larger true katydids (mnemonic: “shh-shh-shh”) as if they were hushing the nocturnal forest.

The pictured individual is a female; notice the curled ovipositor visible under her wings. This organ is used to inject eggs into leaf litter, twigs or under bark late in the fall. As the males tirelessly chorus, her job is to pick the healthiest male to breed with by judging the fluidity, volume and complexity of his music. She gathers her “data” with globular ears on her knees, which are positioned at this odd location to better function as long-range receptors. After breeding, frost usually kills most of the adults. While sight is the nature enthusiast’s most relied-upon sense, sound is also a very helpful way to identify insects, amphibians, birds and mammals without seeing them first. Many of our local crickets, cicadas and katydids are considerably more identifiable by their calls than by visual



Spectrogram of a Lesser Angewing’s song (Sullivan Co., TN 2019)

The song may be heard here:

<https://www.inaturalist.org/observations/41330614>

Recorded by the author, processed with Avibase Bioacoustics

observation. As a result, a twilight chorus of crickets can turn an evening rocking on the back porch or sitting around a campfire in the state park campground into an incredibly detailed yet easily legible natural history narrative.

This summer and fall, I will be recording the songs of crickets, katydids, cicadas, grasshoppers and other vocal insect species throughout the Roan Highlands with a grant from the Friends of Roan Mountain. Due to the subtlety of singing insects, as well as their tranquil elusiveness, many of their songs need documentation in the Southern Appalachians. Not only are singing insects cherished for their musical inclinations, but they are also biodiverse, ecological treasures that serve a variety of purposes as predators, prey and audible bioindicators of forest health, pollution and climate change, much like salamanders and aquatic macroinvertebrates. I plan to compile annotated recordings, natural history data and photographs of these insects which call Roan Mountain State Park, the ambient Cherokee and Pisgah National Forests, Grassy Ridge and adjacent private land home so that everyone captivated by the mountain will be able to enjoy and learn from these remarkable creatures.

*If you have some favorite "listening spots" where you hear singing insects around the park, please let me know! The best way to contact me is via email, [crittercade@gmail.com](mailto:crittercade@gmail.com), or through iNaturalist, [@cadecampbell](https://www.inaturalist.org/users/cadecampbell).*

## **ROAN MOUNTAIN STATE PARK HAPPENINGS**



*Ranger Philip Hylan sent us the following:*

It is with great pleasure that I announce the management appointment of Monica Johnson at Roan Mountain State Park, effective April 12. Please help me welcome and congratulate our newly appointed Park Manager 2 in Roan Mountain, TN. Manager Johnson is a native of Pikeville, TN, and a graduate of Lee University with a Bachelor of Science in Physical/Health Education with emphasis in Parks and Recreation. She also holds a Master of Science in Leisure and Sports Management, with a concentration in Parks and Recreation Management.



Monica has already enjoyed an exciting career with TN State Parks. She began in 2000 as a seasonal clerk at Fall Creek Falls SP and then worked at Cumberland Mountain SP in part-time positions including SIR in 2006. In 2007 Monica became a full-time park ranger at Tims Ford State Park and later transferred to Cumberland Mountain State Park in 2009 where she has been an integral part of the team and overseen a variety of the operations and activities at the park over the last decade.

We are excited to bring Monica on in the TSP management ranks and look forward to seeing her development and leadership at Roan Mountain State Park. Monica has a passion for travel and the outdoors, specifically snowboarding, rock climbing, and hiking. She will be residing in Roan Mountain with her four-legged kids, Koda, Copper, and Bison. Welcome, Monica!

# Hello Adventurers !

## Make Lemonade

I hope you all are staying safe and protected in these strange times. It is hard to watch spring go by without getting up on the mountain.

So, when life gives you lemons, make lemonade! Check out these sweet lemonade ideas:

Ranger Meg is making some great videos. I love the name "Backyard Botany." These are great! They are a gentle introduction to exploring things that you can find close to home. They are posted on Facebook. Be sure to Like and Follow [Roan Mountain State Park](https://www.facebook.com/roanmountainstatepark/), and share these videos with your Friends.

<https://www.facebook.com/roanmountainstatepark/>

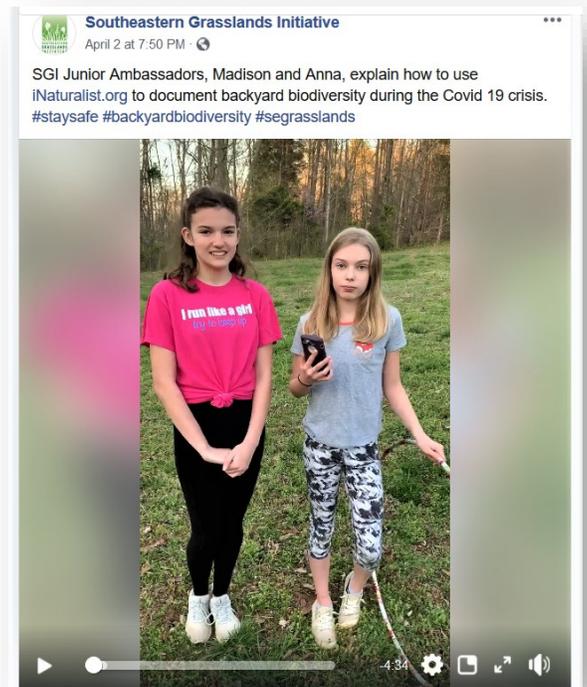


Here is a good way for the whole family to explore nature. It involves a smartphone and the iNaturalist.org app. Madison and Anna are the daughters of Dwayne Estes of the Southeastern Grasslands Initiative. (They were at the 2018 Winter Naturalists Rally.) They demonstrate how easy it is to use technology to help identify plants growing in your backyard.

To expand a little on their idea, the hula-hoop is to focus your attention to a manageable area. You could use a loop made out of string or rope. Toss your hoop or loop randomly. Then examine all of the different plants growing within that circle.

Their videos on Facebook at [Southeastern Grasslands Initiative Volunteers: https://www.facebook.com/southeasterngrasslands/videos/556491374984481/?v=556491374984481](https://www.facebook.com/southeasterngrasslands/videos/556491374984481/?v=556491374984481)

We are looking forward to getting back on the mountain. Until then get out in your backyard. Let us know what you discover.



Xtreme Roan Adventures – is still being planned for Friday evening, July 31 and Saturday, August 1, 2020.

*'hope to see you on the mountain soon.*

Ken Turner  
423-538-3419

[Ken@XtremeRoanAdventures.org](mailto:Ken@XtremeRoanAdventures.org)

# ETSU Graduate Students to develop map, web-application of Twin Springs

— Maggie Coffey, Tyler Wicks, and Trevor Chapman

Twin Springs is a great example of a cove hardwood forest with pristine mountain streams. This forest community can be found throughout the coves of Appalachia and is known for its abundance and diversity of natural life. It is our goal to share this diversity through online tools we are working to develop. We are biology graduate students working with the ETSU Department of Geosciences to build these tools. We want to give visitors access to a guide of flora and fauna that they might see at Twin Springs as well as a map of the area. For the first time, we will create a map of the Twin Springs site with all the trails and amenities marked. We also would like to work with the friends group to make the main loop an interpretive trail. This will involve creating a map marking interesting natural features of the site with corresponding information. All of these tools will be combined in an easy to use and access online StoryMap for the Twin Springs site.

ESRI's ArcGIS StoryMaps provides a unique way for creators to share their content with others. This interactive web-based application allows the authors to combine custom maps, pictures, and video into an easy-to-navigate digital platform. The *Sounds of the Wild West* story map (<https://storymaps.esri.com/stories/2018/sounds-of-the-wild-west/index.html>) provides an excellent example of the possibilities for outreach content that can be provided through this tool. We plan to create a similar story map that incorporates interactive maps and field guides for the Twin Springs Recreation Area. The general public will be able to access the story map through an embedded weblink that can be shared on the friends group's website and Facebook and can be downloaded to a mobile device for offline usage.



A major component of the story map will be the flora and fauna that can be experienced during a visit to the area. Seasonal variations will be incorporated to provide year-round engagement for visitors. Updates to the story map can be easily added as necessary, and special notices can be posted to alert visitors of events or closures. This story map will be an interactive educational tool that will encourage people of all ages to get outdoors and experience all that Twin Springs has to offer.



Photo: Nancy Barrigar

A Red Trillium (*Trillium erectum*), also commonly called Red Wakerobin, growing beside a picnic table at Twin Springs.

We had a great meeting with President Gary Barrigar and Larry McDaniel earlier this year at the Twin Springs site and we had planned to roll out an early version of the StoryMap by the end of April. The Covid-19 Pandemic has however prevented us from working at the site and like many things the project has had to be pushed back. We are looking for members of the Friends of Roan Mountain to get involved to help push us to the finish line! Our biggest need right now is for pictures from the site of the various plants and animals that call it home. Since we are not able to be on site right now to take pictures, we would love to use any pictures member of the friends may have. Also if anyone has any compiled species lists from the area we'd love to take a look at them. If you would like to participate please email Tyler Wicks at [wickstd@etsu.edu](mailto:wickstd@etsu.edu).

# SNOW FLEAS ON THE ROAN

Jamey Donaldson reporting April 2020

Poikiloblast... have you seen Roan's Pink Snowflakes; the metamorphosed gemstones especially visible in the Bakersville Gabbro when it's wet? Geologist Bob Whittemore wrote an article about this for our [Friends' Winter 1998 newsletter](#). But, let's talk about something else you might not have noticed: Snow Fleas, *Hypogastrura nivicola*, which are a species of springtail, not a flea, and they don't bite. You can read more about them at [https://en.wikipedia.org/wiki/Hypogastrura\\_nivicola](https://en.wikipedia.org/wiki/Hypogastrura_nivicola) which is where I got this close-up picture:



I've been watching them for years high up on Roan during the winter when they are conspicuous on snow. I took a few phone photos (below and right) on February 25 this past winter where thousands were caught in an eddy pool along the Appalachian Trail during a snow melt on Roan High Knob. They are about the same size as fleas and look black on the snow, but they are dark blue instead. They have a natural antifreeze that allows them to keep moving below freezing though they are still quite sluggish.





## Haw Orchard Ridge and Roaring Creek Valley tracts protected, totalling over 110 acres

Southern Appalachian Highlands Conservancy has conserved more tracts in the Highlands of Roan, including a prominent ridge near the Appalachian Trail and two properties in the Roaring Creek area.

The Haw Orchard Ridge property adjoins Pisgah National Forest, rising to over 5,400 ft. just south of Roan High Knob. It is visible from the Appalachian Trail at Round Bald and Grassy Ridge Bald.

“Haw Orchard Ridge protects a portion of the well known red spruce-Fraser fir stand which stretches from Roan High Knob to Carvers Gap,” says SAHC Roan Stewardship Director Marquette Crockett. “This spruce-fir stand is used by numerous rare high elevation species including Red crossbill, Northern Saw-whet Owl, and Pygmy Salamander. It is also inhabited by federally endangered species including the Carolina Flying Squirrel and the Spruce-Fir Moss Spider. We hope that our protection of this property and restoration work will help to create a safe haven for these climate sensitive species.”



SAHC will manage the land as a nature preserve, restoring conifer habitat for birds with a grant from the Cornell Lab of Ornithology Land Trust Bird Conservation Initiative.



The two new acquisitions in the Roaring Creek Valley area join a network of protected land in the Highlands of Roan. This network includes other SAHC preserves on the slopes of Big Yellow Mountain and the Big Yellow Mountain Preserve, co-managed by SAHC and The Nature Conservancy. The land contains thousands of linear feet of tributary streams and headwater seeps, feeding into Roaring Creek. The North Toe River and Roaring Creek have been identified as critical to protecting water quality in the Southern Appalachian Mountains, and the watershed supports a host of rare species, including the Federally Endangered Appalachian Elktoe mussel.

In addition to their importance for protecting water quality and intact forests, the route of the

Overmountain Victory National Historic Trail passes along the edge of one of the tracts, and the other contains approximately 14 acres of old Christmas tree farm fields, which SAHC will restore as meadow habitat for Golden-winged Warbler, Appalachian Cottontail, and other rare early successional species and pollinators.

“Old field and early successional habitats in the mountains are disappearing fast,” says Marquette. “When we acquire a property that allows us to manage for these habitats, without cutting surrounding forests, it is a win-win for conservation.”

*Photos by Travis Bordley, SAHC Roan Seasonal Ecologist*

# GIFTS AND MEMORIALS

Friends of Roan Mountain gratefully acknowledges these charitable gifts

## Honoree Gifts

Don Fisher for Gabrielle Zeiger

Shelley Stahlman & Allen Pickel for Norma Morrison

Network for Good Anonymous for Norma Morrison

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Jo Driggers for Barbara Schell

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