



—Guy Mauldin

For many people the rhododendron garden is the primary attraction on Roan Mountain. I was on the mountain once when Gray's lily, spreading avens, Roan Mountain bluet and other rare plants were blooming and I heard someone say, "It is a pity that nothing is blooming here."

For me the flame azalea (*Rhododendron calendulaceum*) should also share star billing. However, the fame of the flame azalea on Roan Mountain suffers from the fact that one must hike a short distance to see the plant in all of its glory. There is a single plant in the yellow range near the highway at Carver's gap providing a small representation of the range of the flame azalea. With a short hike to the far side of round bald one can see a grouping of flame azaleas in a wide range of colors from light orange to scarlet. It is worth the short hike to see the blooms at the end of June or the beginning of July.



Photo: Gary Barrigar

June bloom at Engine Gap along the AT, east of Round Bald

The common name of the flame azalea comes from its prevailing orange color making the unopened bud look like a candle flame. This plant has double glory. First there is the flower in the early summer and then fall foliage provides a second show of color.

This azalea has a wide color range including pale yellow, apricot, orange and scarlet. There are approximately fifteen native deciduous azaleas in the Eastern United States, but the flame azalea is the most popular. As a result there are named cultivars such as Gregory Bald which is cloned from a bush in the Smoky Mountains

The flame azalea is more adaptable than most of the native azaleas; except in its most southern range it will grow in sunny locations and develop into a mound as wide as tall. Unlike other Appalachian azaleas which cannot stand the heat, the flame azalea has been grown successfully in California and in Florida.

There are plants in the rhododendron genus which bloom according to day length and can be timed like the swallows at Capistrano. The flame azalea is not one of these. Its bloom time can be altered by controlling the temperature. In its most southern range it may bloom in March and in its most northern range it may bloom in July.

The flame azalea has been widely used as parent stock for hybridizing. There are three well know categories of these hybrids. The earliest is the Ghent series. These were developed in the 1820's by a baker named Mortier in Ghent, Belgium who used the heat from his ovens to accelerate the bloom time of these late azaleas so that they would bloom with the earlier plants and be available for hybridizing.

Anthony Waterer used the flame azalea in the 1870's to develop the Knap Hill strand and Lionel de Rothschild used

the flame azalea as the foundation of the Exbury azaleas. Rothschild began developing these azaleas in 1922 and worked on this project for 15 years. He developed the most winter hardy of the group and now there are Exbury azaleas surviving in New England.

If you purchase a flame azalea, be sure that it is from a reputable nursery as many are collected from the wild. People tend to collect these azaleas because deciduous azaleas are more difficult to propagate than evergreen azaleas and are more expensive. The azaleas can be rooted from new growth, but they are frequently grown from air layering or from ground layering which is a slow process. Commercially grown flame azaleas are usually grown by asexual propagation as the color is not easily determined from seed grown plants

The common flame azalea has traveled to Europe and returned in different forms giving one the opportunity to enjoy the original or the varieties developed from this American gem.



Monarchs & Milkweed

—Nancy Barrigar

They weigh about half as much as a paper clip. Their adult life lasts about four weeks, except for one generation in late summer. Those individuals are capable of navigating over 3,000 miles to a destination they've never been to before, an annual trip their ancestors have made for 20,000 years. They spend the winter in the highlands of central Mexico, taking advantage of a propitious micro-climate where they shelter in fir trees. This migrating generation mates in the spring and heads north to start the multi-generational roundtrip all over again, with the females searching for the only genus of plant upon which her offspring can feed.

Monarch butterflies, ephemeral and seemingly fragile, are in reality like endurance athletes with a powerful deterrent to would-be predators. Evolution has given the caterpillars the ability to eat bitter, toxic milkweed leaves which, in turn, makes them unpalatable to almost all vertebrates. The adult butterflies sport striking orange and black wing coloration, warning hungry birds to stay away. Monarchs also possess a gene that codes for muscles which favor efficiency over

power and quickness. Thus these bright bits of color are able to glide by us with a more leisurely and less erratic flight than most other butterflies and travel for great distances.

Monarch numbers have declined precipitously over the last decade, falling nearly 90%. Researchers attribute this drop mainly to the loss of habitat. The overwintering grounds in Mexico have been reduced and thinned by illegal logging, rendering the butterflies more susceptible to winter storms. Summer breeding grounds in the U.S. and Canada have shrunk by nearly 150 million acres as milkweed plants succumb to land development and the widespread adoption of corn and soybeans genetically modified to resist herbicides. Milkweed, the host plant of monarchs, can no longer grow among or near the thousands of acres of crops sprayed with glyphosates.



In 2009, a Monarch Waystation was established at the Miller Farmstead at Roan Mountain State park. The waystation provides a great variety of nectaring plants for butterflies as well as

milkweed which is vital to monarchs in particular. A few years ago, milkweed growing at the Miller Farmstead was inadvertently damaged with an herbicide which was believed not to be harmful to broad-leaf plants. Friends of Roan Mountain is making an effort to restore the milkweed.

This past fall volunteers gathered milkweed seeds from around our area. Then in mid-November we held a milkweed seedball-making session, producing 1,008 seedballs! The RMSP staff assisted us by mowing the fields at the farmstead in preparation for the dispersal of the seedballs which took place on a beautiful, sunny Saturday before Thanksgiving. We hope that some milkweed will pop up this summer as a result of this

effort and offer sustenance to some hungry caterpillars.

Friends of Roan Mountain has also submitted a request for milkweed plugs made available through the Milkweed Restoration Project of Monarch Watch.org. Keep your fingers crossed that we are selected as a recipient. If so, we'll be planting these in late spring.

When you visit Roan Mountain State Park, stop by the Miller Farmstead and take a look at the Monarch Waystation display by the parking lot. FoRM has provided new, color brochures to help educate the public about the amazing, migratory monarch butterfly.



Photo: Carolyn Martin



Photo: Carolyn Martin



Photo: Jennifer Hann

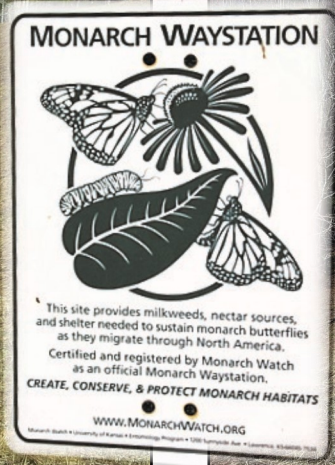


Photo: Jennifer Hann



Photos: Top left - Ingredients for milkweed seedballs. Top right: Making seedballs. Lower right - Scattering milkweed seeds. Center - Monarch Waystation sign. Lower left - Sharing seedballs with a young park visitor.

In Memoriam

It is with sadness we note the passing of the following members of Friends of Roan Mountain – three women who were long-time participants in our Naturalists Rallies.

Edna Von Cannon Potter, Roan Mountain, TN, passed away Friday, October 23, 2015 following an extended illness. A native of Carter County, she taught in the Carter County School System for forty-two years. Edna received the honor of being selected as “Tennessee’s Conservation Educator of the Year” in 1976 and was overjoyed when she was also selected “Teacher of the Year”.

Edna was married to James W. Potter who was a high school principal for forty-four years. The Potters were active in the Roan Mountain Naturalists’ Rally and Wildflower Tours since their inception. They took part in the first organized meeting to plan the annual event with Fred Behrend, a noted and beloved naturalist from Elizabethton, TN. During the 2003, Fall Roan Mountain Naturalists Rally, an award of excellence was developed by the Friends of Roan Mountain. The James and Edna Potter Conservation Award was created to honor those who support, in the highest standards, the mission of the Friends group. This award was created to honor their work and those who follow in their footsteps.



Judith K. Roach, 77, of Kingsport, passed away on Friday, December 25, 2015 at Wellmont Holston Valley Medical Center. She was retired from Eastman Chemical Company, where she was a Market Research Analyst. Judy was community-minded and volunteered in several organizations including Contact Concern and her church. Her interests included bridge, travel, river boating, water skiing, genealogy, nature study, and bird watching. and at her church. Her interests included bridge, travel, river boating, water skiing, genealogy, nature study, and bird watching. She was a long-time member of Friends of Roan Mountain and a regular at our Naturalists Rallies. An organizing member of the Kingsport Chapter of the Tennessee Ornithological Society, she was always generous in sharing her knowledge with others on the birding field trips at the rallies. Friends of Roan Mountain is very grateful to be designated as one of the beneficiaries of Judy’s estate.



Rosie Clark’s friend, Marge Jackson, sent us the following:

For many years **Miss Rosalind Clark** was an attendee and supporter of the Roan Mountain Naturalists Rallies (RMNR). Miss Clark died on February 18, 2016. She was 90 years of age at her death, thus, she had attended a few RMNR’s. Last fall, against my and several other friends’ better judgment, Rosie drove from Atlanta, GA to Marion, NC (in her ’84 Honda with 400,000+ miles) to meet a friend who would drive the final leg of the journey to Roan Mountain to attend the Fall Rally. That was Rosie’s last attendance at a Roan Mountain Naturalists Rally, and at that time she was very ill, but we could not stop her from attending the Rally – that’s how much she enjoyed the RMNR.



An excerpt from Rosie’s [obituary](#) : Rosie saw the world differently than most folks. She lived a gentle, diverse but mostly private life and what she revealed of herself was largely through her art. She shared her humor through the clever titles of her scratchboard paintings. She was also very much herself as Miss Boo the character she created for a children’s television program in Atlanta in the late 1950’s. Rosie’s quick wit and enchanting nature are manifested in her diverse and devoted circle of friends.

In lieu of flowers or other gifts her memory may be honored by displays of kindness to all (including the critters who crawl, slither, fly, pollinate and, in general, help to maintain a healthy balance in the world); telling a silly joke to a neighbor or buying locally grown produce.

Creepy Crawly Exotica:

Astounding Temperate Rainforest Invertebrates on Roan Mountain

— Cade Campbell

Some people in Eastern North America believe that in order to experience the most amazing wildlife and nature, they need to travel abroad. This isn't true. Along with coral reefs, South American jungles and other exotic places, the Southern Appalachian region is one of the places dubbed a biodiversity hotspot. Roan Mountain is especially diverse. Two kinds of northern temperate rainforest mingle with southern nature, creating a haven for plants and animals, especially the small, overlooked ones. Invertebrates make up most of the world's species, and Roan Mountain's. But since the biodiversity of Roan Mountain includes many "bugs", some of these bugs are very large, impressive, or just plain amazing. Just take a look at some of them!



Photo: Cade Campbell

The monstrous creature (left) is powerful, large and its pattern tells that it is full of deadly toxins. Luckily, it is a peaceful detritivore which leaves other species alone. You can see these animals inching across gravel, burrowing through rotten wood, or crawling out of rocks on damp mornings and evenings. Their enormous size deters small predators, and their coloration deters large ones. They actually can't harm you if you only touch them. Their mouths are small and built for nibbling detritus the consistency of pudding, so bites aren't a problem. Their poisonous insides are kept inside by a calcareous armor of shell, and no stingers, pincers, or anything else of that sort are present on this creature. It is the North American Giant Millipede (*Narceus americanus*), and is very vulnerable to humans indeed. You can see them mashed by the tire of a bicycle or car, or squashed by the heel of a foot in the afternoon, after their crepuscular perambulation. They can be held, but not petted. This is because of tiny beneficial mites

that help regulate the millipede's external membranes, and roughly handling one of these animals can expel these mites and eventually kill the millipede. It doesn't have a million or even a thousand legs, but around two hundred. If you watch one walk, its legs ripple like a wave along its body. Sometimes, several "waves" of legs will be traveling simultaneously up the millipede's underside if it's larger. They aren't common, so if you see one, you'll know it. This millipede also has an African relative, which is sought after as a pet because of its unique behavior, puzzling build and peaceful disposition.

A spout of orange mush bursting from a tunnel in a red oak log is a telltale sign of the Northern Patent Leather Beetle (*Odontotarsus disjunctus*), "Jerusalem Beetle", or "Bessbug" on the move. If you turn over many red oak logs, you will see many things. Oriental cockroaches (an introduced species) scuttle or flutter away from the sunlight. Blind soil centipedes slowly but slyly disappear down holes, a few metallic green cuckoo bees may spread their wings and zoom buzzing away, but the real show-stopper is the occasional inch-and-a-half black, glossy beetle sitting in the rotten wood. Upon closer inspection, its legs and wings are fringed with long, bronze fur strips, and seersucker grooves decorate its back. On its belly, pink-red parasitic mites scramble over regal black plates extending the length of the bessbug. If you look inside the log under which you found the bug, you may find many more of its kind. They will make a remarkably audible squeaking commotion as the stumble and fall over each other in surprise if you come close. Some will be large and glossy black, but others are scarcely an inch, possess a slight maroon tint, and have a larger horn on their heads. The latter is the male, and the first is the female. Males prefer the deeper burrows in the log. Bessbugs are friendly to each other and other organisms. Their strength and labor provide tunnels large enough to easily be shared with smaller wood-dwelling insects (such as click beetles), and in cold-weather, may save the lives of warmth-loving insects such as bees. Their abandoned burrows can become homes for little furry creatures as well as snakes and salamanders. They settle down after being caught, and go about their business. Curiously enough, bessbug larvae cannot fend for itself, in fact, it can't even eat by itself. Parents must



Photo: Cade Campbell

shove food in its mouth for it to be able to feed. Orphaned bessbug grubs are rarely left to starve in a colony. Instead, other parent bessbugs, male and female, will gather extra food to feed them. Yes, they live peaceful lives, most of the time at least. Their most frightening predator is the great Pileated Woodpecker (*Dryocopus pileatus*). It will swoop upon a colony and hack at a whole log with a bessbug colony residing within. It determinedly drills into the log until a storm of clay-colored wood chips lash through the woods with echoing drumming that rivals the grouse in ferocity. Once the woodpecker is done, it flies away, hardly leaving a previous Bessbug inhabitant. Bessbugs, since they are beetles, have many relatives across the world.



The remarkable Northern Walkingstick (*Diapheromera femorata*), or "Stick Bug" is a well-known and beautiful insect. They are often seen in late fall, even after the frost sets. The reason for this appearance is their late breeding period, when they congregate to outdoor buildings such as sheds and campsite bathhouses. Though they don't have wings, they follow glowing lights to these buildings, where they meet with other stick bugs. Then they will depart and lay a single egg in the leaf litter. But the egg is cloned. Male stick bugs are extremely rare, maybe one in a hundred stick bugs is a male, in optimal conditions. So female stick bugs have been recorded to clone themselves, though they sometimes mate. They feed on foliage, usually of hickory or oak, and live peacefully high in the canopy outside of breeding season. Nymphs just look like small adults, and are only about an inch long. Some walkingsticks grow up to three and a half inches long. The giant walkingsticks, the Northern's larger relatives, live in tropical to

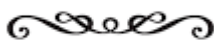
subtropical environments and are more vibrantly colored. That's another fact; Northern Walkingsticks can be green, yellow, red-streaked, brown, striped or any number of colors and shades, all for the purpose of camouflage. They also have a unique quirk about them. When it feels threatened, a stick bug will rock side to side on its spindly legs, making it almost invisible to predators with bad eyesight, and making it seem larger to creatures with better vision. When resting, a stick bug will hang upside-down with its front legs and antennae pointing in front of it, and its two pairs of back legs symmetrically stretched out beside it.

With an unseen swoop and a precise landing, the hulking, inch-long body of the Bee Killer (*Promachus fitchii*) or Giant Robber Fly is a bold and imposing sight to forest insects. Almost as fierce and effective as the dragonfly in its hunting methods, robber flies don't hesitate to attack the most dangerous, stinging bees, and with their maneuverability and powerful bite, they can fly away with a tasty new meal. With their raccoon-striped tail, dusky, hairy back, as well as their neatly folded wings and obsidian-black eyes, these bugs are easily recognized. Robber fly larvae live underground and feed on burrowing insects and decaying matter, rarely noticed. But when they emerge from the earth, they are a fearful sight to other insects. When hunting, a robber fly may sit in ambush at a favorite perch, snatching unsuspecting prey as it goes by, especially bees and wasps. Piles of insect bodies with their insides removed gather under a favorite bee-killer perch. The adults fly mainly in late summer, but larvae hatch out in spring to devour June Beetle larvae before they turn into adults. Robber flies have many fascinating relatives, including a nectar-drinking pollinator and even a dancing robber fly.



So this spring and summer, look for the four insects above. You may see them, their relatives, or even discover a whole new species!

Cade Campbell is in the 8th grade and is currently working to become an Eagle Scout. In addition, having recently completed the required classes, Cade is now a certified TN Volunteer Naturalist.



"As you sit on the hillside, or lie prone under the trees of the forest, or sprawl wet-legged by a mountain stream, the great door, that does not look like a door, opens." --Stephen Graham

What's New in the Park?



Roan Mountain State Park Recognized for Sustainability



Back in January, Roan Mountain State Park was given the “Excellence in Sustainability” award by Tennessee State Parks. This award recognizes RMSP as excelling among other parks across the state in our efforts to increase recycling and make energy-saving improvements to park facilities. Help us to continue to strive toward more sustainability in the park, and please utilize our recycling stations. You may find recycling bins at the Conference Center, Camp Store, Visitors’ Center, and in the overflow parking lot behind the Cabin Area.

FINALLY! Aviary Update



After several months spent awaiting inspections, we’ve finally got the last “t” crossed and “i” dotted... the aviary is complete and ready to accept its raptor residents. It has been difficult for us to keep our patience as the gears of government ground out slowly, but we are eagerly anticipating the addition of two birds to our park family. STAY TUNED... we’ve got our fingers crossed in the hopes of receiving raptors this spring!

Running Club at Roan Mountain State Park



Thanks to a grant from the Tennessee Dept. of Health, Roan Mountain State Park is currently sponsoring a community running club. Members meet in the park weekly to train for the upcoming Diamond Dash Trail Race. This 5K trail race will be held in celebration of National Trails Day on Saturday, June 4, 2016. The club is open to anyone with an interest in running and training for the trail race. If you would like to participate, please call Coach Brian Lawhern at 423-772-3901.

Park Signage Improvements



During the off-season, park staff and volunteers have been working to improve the trail signage denoting various trailheads and trail junctions. You can see the results of our efforts on the Blue 2, Turkey Trot, and Moonshiner’s Run trails. Additional signs for the rest of trails will be added as they are completed. Hopefully, the new signs will help you find your way as you take your hikes through the park.

Invasive Plant Pests are Here



Spring has sprung, and as lovely native plants and wildflowers come out in all their glory, so too does other less desirable flora rear its ugly head. Garlic Mustard is up, and Japanese Knotweed is on its way. Park staff has already begun the annual task of controlling these invasive species. If you would like to contribute your efforts to the “Weed Warrior” cause, please contact Ranger Meg Guy, meg.guy@tn.gov.



Ready for Summer Adventures on the Mountain

by Heather Jones



After this long winter, all of us are ready for creek walks, salamander encounters, and just being in the mountains! We are making arrangements to do that and more! Plans are underway for Xtreme Roan Adventures 2016, a family-oriented, nature-centered event which takes place on Roan Mountain in late July. XRA allows kids and their families to get up close to some of nature's greatest treasures, and have the opportunity to learn from knowledgeable area naturalists.

Last year's event was a huge success, beginning with an entertaining Friday night presentation by Jeremy Stout called Rock Stars. We all learned about the connection between geology and astronomy while sharing lots of laughs. Larry's moth sheet always attracts more than moths—everyone lines up to see the varied display. Naturalists head out to lead night hikes to find bats, owls, and other nocturnal creatures.

On Saturday there are always so many activities to choose from. Previous activities include short hikes individually focused on finding salamanders, snakes, birds, animal tracking, and learning about the geology and ecology of the creek. These hikes are led by naturalists who are able to answer mysteries you may have wondered about. After these Adventures, there is still so much to do after lunch, including Nature Crafts, Owl Pellet Dissection, Wild Animal Encounters, Butterfly Adventure and the Baa-tany Goat Hike up on the balds.

This year there will be some *new* Adventures! Mark your calendars for **Friday, July 29 and Saturday 30 for XRA 2016!** We hope that you have many Adventures this spring, and we hope to see you there!

For more information, please visit xtmeroganadventures.org.

Baa-tany Project



Goatherd, Jamey Donaldson, says the 9th! Annual Herding of the Goats onto the Balds is *provisionally* set for Wednesday June 22.

Keep an eye on the Baa-tany Project website for updates.

<http://www.baatany.org/>

SAHC News & Upcoming Events

Roan Naturalist 2016

The Southern Appalachian Highlands Conservancy and our partners at the Appalachian Trail Conservancy have selected Eric Rayfield as the Roan Naturalist for 2016. Eric, a resident of Elk Park, NC, fell in love with southern Appalachian ecosystems while completing his BS in Wildlife Biology at Lees-McRae College. He also explored the high country's wilderness by leading the school's backpacking club and teaching backpacking courses. Eric is currently completing his MS in Ecology and Evolutionary Biology at Appalachian State University, where he is using citizen science to study the genetics of high elevation bumblebees. Please stop and say "Hi" if you run into him on the trail this summer!



Free Guided Hikes and Outings in the Highlands of Roan

On Saturday, June 11, the Southern Appalachian Highlands Conservancy (SAHC) will hold its annual June Jamboree - a day of free, guided adventures followed by a Social on a protected property at Big Rock Creek in the Highlands of Roan. SAHC will offer five group outings with choices for all age and ability levels. They include:

Hike #1: Carvers Gap to Grassy Ridge

Hike #2: Roll 'n' Stroll at the Rhododendron Gardens

Hike #3: Ride the Roan: a Scenic 37 mile Road Bike Loop

Hike #4: Yoga in the Roan with Kris Moon

Hike #5: Challenge Hike: Cloudland Hotel Site to Big Rock Creek



We will enjoy the company of friends and family and learn about our recent conservation initiatives at the Social, while enjoying light refreshments and beverages. Donations appreciated.

Start times and difficulty vary for the hikes. To learn more or to register please visit <http://appalachian.org/news/> or call our office at [828-253-0095, ext. 205](tel:828-253-0095).

— Marquette Crockett - Highlands of Roan Stewardship Director

58th Roan Mountain Spring Naturalists Rally Presenters

Liz Domingue - Friday, April 22, 7:30 p.m.
Butterflies & Familiar Moths of the Smokies

Mick Whitelaw - Saturday, April 23, 7:30 p.m.
Roan Mountain and the Tweetsie: Trains, People and Iron



Between Friends

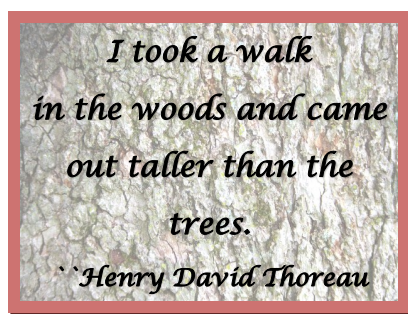
Deadline for Rally Meal Reservations – All dinner and lunch meals must be prepaid. If you plan to eat a catered dinner or purchase a bag lunch at the Spring Rally, you must send your check in advance. The deadline is **Tuesday, April 19th**. The reservation form can be found in the brochure or on our website. Mail your check and reservation form to Nancy Barrigar, 708 Allen Avenue, Elizabethton, TN 37643. We greatly appreciate your cooperation in helping us plan accurately!



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 22 - 24, 2016
	Youth - XRA	Last Friday—Saturday in July	July 29- 30, 2016
	Fall Rally	Friday - Sunday in September after Labor Day	Sept. 9 - 11, 2016
	Winter Rally	Saturday in February nearest Valentine's Day	Feb. 11, 2017



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 Printed on recycled paper