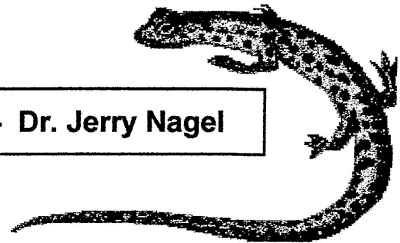


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Spring 2000

Salamanders on Roan Mountain

-- Dr. Jerry Nagel



The Southern Appalachians are known to herpetologists as the leading hotspot in the world for salamanders. Roan Mountain, naturally, has its share of this amphibian diversity with a possible total of 19 different species. These range in size from the two-foot long Hellbender found in the clear, cold waters of the Doe River at the foot of the mountain to the diminutive two-inch Pigmy Salamander confined to the spruce/fir forest at the top of the mountain.

Fifteen of these species belong to the taxonomic category known as the Plethodontidae and are commonly referred to as the "lungless salamanders". These salamanders, indeed, are completely lacking in lungs and carry out oxygen and carbon dioxide exchange entirely through their skin. Like all amphibians, they start out as eggs and have a larval stage before reaching the adult stage. Some of these

lungless salamanders, however, are completely terrestrial and the larval stage passes in the egg before hatching so there is never an aquatic stage in their life-history. In all the species in this family, the female remains with her eggs after she lays them and broods them. This accomplishes two things. First, she guards the eggs against predators such as carnivorous beetles. Secondly, it has been shown that if the female is removed from a clutch of eggs, they quickly succumb to fungus infections. Her skin secretes a fungicide which prevents the development of fungi.

Many local people in the mountains refer to salamanders as "spring lizzards" and in past years it was not uncommon to see bait shops advertizing "spring lizzards" for sale as fish bait. Mountain boys earned pocket cash by searching under rocks at the edge of our small mountain streams for these

salamanders and selling them to the bait shops. This practice has now been halted in Tennessee because the most popular species for this use have low reproductive rates and can not sustain this exploitation.

Not all species of salamanders are good fish bait because many of them contain skin toxins which make them distasteful to predators. One example of this is the red-spotted newt (which does have lungs). Adults are commonly found in farm ponds cruising lazily near the surface with complete indifference to the hungry bass below. Their skin toxins are so distasteful that any bass that happens to grab one quickly spits it out and does not make that mistake again.

The adult newt lays eggs in the pond which shortly hatch into larval salamanders with a full set of gills. In most amphibians

this larval stage would be followed by metamorphosis into the adult form, but in the newt the greenish larva instead metamorphoses into a gaudy orange land-dwelling stage known as the "eft". On a rainy day these little creatures can sometimes be encountered boldly wandering across the forest floor in search of insects. This gaudy coloration is a warning to predators. Experiments have shown that if a naive Blue Jay is exposed to an eft, it will quickly pounce

on the eft as a potential meal and just as quickly release it and begin drooling and wiping its bill on the surrounding vegetation. This mistake, also, is not repeated! After a year or two living on land, the eft undergoes another transformation into a green, red-spotted adult and returns to the pond to spend the rest of its life educating bass.

This spring at the Naturalists' Rally give some thought to accompanying Greg McConnell from the

Biology Department at Emory and Henry College on his salamander field trip. The moist conditions of the spring rally are ideal for salamander searches and Greg knows the best hotspots on the Roan. In addition, he may tell you how the salamanders lost their lungs. For further reading, Maurice Brooks' classic book, *The Appalachians*, contains an entire chapter devoted to these creatures.



42nd Annual Roan Mountain Spring Naturalists' Rally

Friday through Sunday, May 5 - 7, 2000 Roan Mountain State Park, Friends of Roan Mountain, and hopefully, you, will be celebrating our annual spring Naturalists' Rally! This year promises to be a fun event with new speakers, an added night of festivities, and several new leaders.

In an effort to plan a variety of programs at different times, we will be offering tours on Saturday at 6:30 a.m., 8:30 am, 10:00 a.m., 2:00 p.m., and 9:00 p.m. On Sunday, tours will begin at 8:30 am and 2:00 p.m. in the campground. You will also note in the brochure, a great variety of hike leaders and topics. We hope you will be able to find many trips that are of interest to you! A special thanks goes out to all of the leaders who are willing and eager to share their expertise to make our weekend a memorable one. With the convenience of the new Conference Center, we will also be offering workshops at 10:00 a.m. on Saturday; one led by Pete Wyatt of TWRA, and the second with Joe McGuinnis of the U.S. Forest Service.

The Friday night dinner (please note the new night for the spring dinner), will be catered by City Market of Elizabethton, Tennessee. Their buffet meal will feature baked chicken breast, 2 vegetables, bread, salad, a desert variety, and drinks. Please make your reservation in advance by mailing the registration form in the brochure along with \$8.50 for adults and \$4.00 for children 12 and under. You may also reserve a meal by calling Jennifer Laughlin at 1-800-250-8620, Extension 108. Be sure to make your check payable to City Market.

On Friday night we are pleased to welcome Ron Austing of Dillsboro, Indiana, noted author and photographer, who will be presenting his program entitled, "50 Years of Photographing Birds." On Saturday night, Chris McGrath of the North Carolina Wildlife Resources Commission will share his expertise with his program, "Night Flyers."

Thanks go out to Friends of Roan Mountain, who have made it possible for us to provide our weekend's evening programs, in addition to the great food on Saturday night! They will be requesting a \$3.00 donation on Friday night only, which will go directly to the Friends group. Thanks to all of you who have supported this group and helped to make both of these excellent presentations possible.

If you do not yet have a copy of the brochure, or would like extra copies for friends, please call Jennifer at the above number and one will be mailed to you. We look forward to seeing you at the rally!

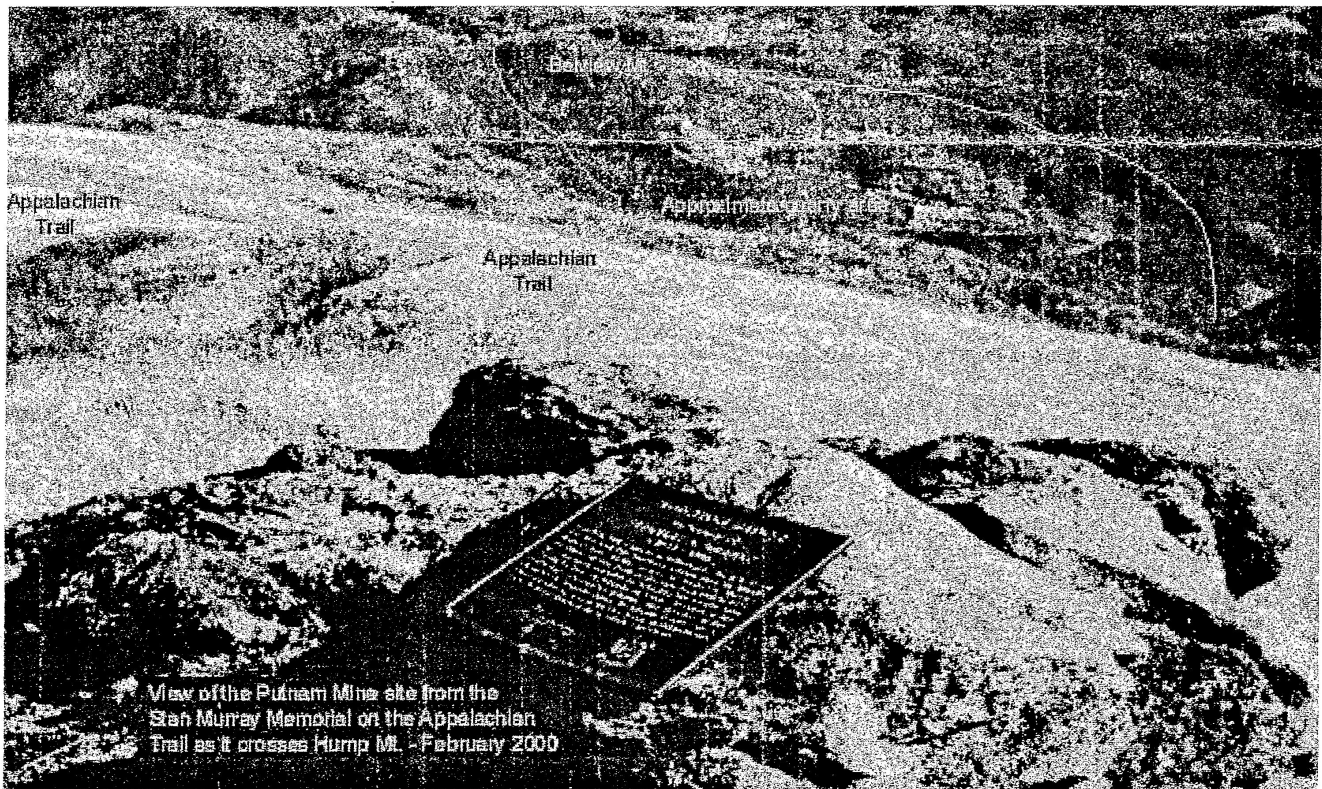
Roan Highlands Viewshed Threatened!

The comment period has been extended to April 30, 2000!

The North Carolina Department of Environment and Natural Resources wants to hear your comments about protecting the Roan Highlands area and Appalachian Trail from an open pit gravel mine!

Here's the situation ...

The North Carolina Department of Environment and Natural Resources (DENR), the agency charged with protecting the environment and natural resources of the state, has issued a mining permit for an open pit gravel mine/quarry (151.36 acres in size) on Belview Mountain in Avery County, North Carolina, a mere 1.5 miles from and within sight of the Appalachian Trail as it crosses the rare Southern balds of the Roan Highlands. No public hearings were held before the permit was issued to the Clark Stone Company. Sensitive areas possibly impacted by the rock crusher, quarry, and transportation operations include the Appalachian Trail Corridor, the Overmountain Victory National Historic Trail, and the Toe River.



The damage of the mine on Belview Mountain will be most visible from the Stan Murray Memorial Plaque on Big Hump Mountain, and then heading north on the Trail for approximately thirty minutes of hiking time.

The state Mining Act and the N.C. Appalachian Trail Systems Act directs DENR to protect our public lands in general and the Appalachian Trail and its environment in particular. DENR failed to do this when they failed to consider the location of the AT in issuing the permit for the open pit gravel mine on Belview Mountain. "It was an oversight," said Don Reuter of the N.C. Department of Environment and Natural Resources. "It may not have been a mistake in issuing the permit, but it was a mistake in that all the information wasn't considered. There's a lot of permits that come through."

Mike Easley, the Attorney General, asked for public hearings to correct this grievous error, and DENR scheduled a hearing on March 16 at 7pm at the Avery County Courthouse in Newland. "The waters and mountains of Western North Carolina belong to the people," Easley said. "This mine will be operating near a particularly scenic and sensitive area. The public deserves to be heard about any potential threat to precious natural resources."

Easley demanded a public hearing to, at the very minimum, assess the level of compliance with the permit's terms and conditions, and potential modifications to mitigate the mine's visual, noise, and water quality impacts. "The public deserves more information about this mine and, above all, the public's views on the potential impact of this operation should be heard and carefully considered," Easley said. "I have directed attorneys in both our Western and Raleigh offices to gather the facts, and, at a minimum, urge DENR to modify or revoke the permit that was granted without a public hearing. We stand ready to provide all the legal assistance DENR needs in order to protect the public."

WHAT YOU CAN DO

DENR has agreed to accept e-mail comments into the official record. You can visit to a web site sponsored by Concerned Citizens to Protect Belview Mountain (Jay Leutze, Chairperson) and participate in an on-line letter-writing campaign.

<http://trailplace.com/save/belviewmtn.html>




There you will find a letter-writing section that will help you compose a letter in your own words and send your comments (which are automatically assembled into the proper format) by e-mail to all of the key decision-makers who will be involved in making the final decision about what to do about the permit for the mine on Belview Mountain. Respond by April 30 in order for your comments to be entered into the official record.

The above information was gathered from the Concerned Citizens to Protect Belview Mountain web site and from a report by Jay Jennings at WRAL Online

Summer Activities at Roan Mountain State Park!

Brochures are now available listing all of the fun programs planned for the state park this summer! Please call Jennifer Laughlin at 1-800-250-8620, extension 108, if you would like copies of programs sent to you. Brochures currently available include the Special Events 2000, Summer Concert Series 2000, and Miller Homestead Saturdays. We also offer a variety of daily programs, Tuesday through Saturday from Memorial Day weekend until Labor Day weekend. Please call to get on our mailing list for all of these activities!

Coming soon!

42nd Annual Roan Mountain Spring Naturalists' Rally	Fri. - Sun., May 5-7
19th Annual Junior Trout Tournament 	Sat., May 13
54th Annual Rhododendron Festival	Sat. - Sun., June 17 & 18
Nature Discovery Week	Tues. - Sat., June 20-24
Roan Mountain's Price is Right	Fri., June 30
Independence Day Activities and Fireworks	Sat., July 1 
Highlands of Roan Nature Excursions	Sat., July 8
8th Annual Roan Mtn. Butterfly Count 	Sat., July 15
Young Naturalists Workshops (By registration only)	Thur. & Fri., July 20-21



Volunteers Needed !!

We're looking for folks to help with a few jobs at the Spring Naturalists' Rally:

- ⇒ Moving furniture following Friday evening's program
- ⇒ Directing cars at the field on Saturday
- ⇒ Serving refreshments at Saturday evening's social
- ⇒ Photographers —
People to take candid shots at the rally. We hope to put together a public relations slide program for Friends of Roan Mountain.

Contact Jennifer Laughlin at 1-800-250-8620, extension 108, if you would like to help in any way.



GARY IS EXCITED!! . . .

about the Fall Naturalists' Rally!
Friday - Sunday, September 8, 9 & 10

This year's guest speakers promise to be extremely interesting.

On Friday night the speaker will be George Constanz, noted biologist, ecologist and author of Hollows, Peepers, and Highlanders: An Appalachian Mountain Ecology. His slide program will feature adaptations of Appalachian plants and animals.

On Saturday night TWRA Fisheries Biologist Bart Carter will present a slide program on the aquatic habitat diversity that Tennessee offers and explore the wealth of fish species and other aquatic life that inhabits this diverse state.

Has Your Membership Expired?

Our treasurer, Anne Whittemore has been busy sending notices to those whose membership has lapsed. If you received a card, we hope you will choose to renew. Please take a moment to complete the information below and mail it in. This will insure that you continue to receive the newsletter and updates on information concerning the organization. You will also continue support of naturalist activities on the Roan. An additional benefit is a 10% discount from our corporate sponsor, Mahoney's Outfitters in Johnson City, TN.

Name _____

Phone (_____) _____

Address _____

Check appropriate membership category:

Individual (\$10) _____ Family (\$15) _____

Student (\$5) _____ Corporate (\$45) _____

Dues: \$ _____ Contribution: \$ _____

Total Enclosed: \$ _____

Please make check payable to
Friends of Roan Mountain and return to:
Anne Whittemore, 208 Mark Dr., Gray, TN 37615

Roan Mountain Species Databases

Jerry Nagel and Tom Laughlin are in the process of assembling databases as a first approximation at constructing an information resource of data relevant to the enjoyment and preservation of the greater Roan Mountain ecosystem.

Birds	Angiosperms
Fishes	Bryophytes
Invertebrates	Gymnosperms
Mammals	Ferns & Fern Allies
Reptiles	

They invite interested parties to comment on, or add to this information.

If you have information relevant to this project please contact Jerry Nagel.

VISIT THE FRIENDS WEB SITE AT

www.etsu.edu/biology/roan-mtn/



Nancy Barrigar
Editor
708 Allen Avenue
Elizabethton, TN
37643
423.543.7576

F R I E N D S O F R O A N M O U N T A I N

