FRIENDS OF ROAN MTN

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The Hack Line Road -- Then and Now

— Dan Russo

"A hack line runs to the top of Roan Mountain to Cloudland Hotel, a ride of twelve miles up a new and beautiful road, winding up the sides of the mountain passing the most magnificent scenery at every turn . . . " This statement, from advertising literature promoting the Cloudland Hotel, was written sometime after the resort hotel's completion in 1885.

The Hack Line Road is so-named because of the horse-drawn hacks (or wagons) which transported hotel guests from what was then Roan Mountain Station to the hotel atop the Roan. Long after the hotel's closing, the road continued to be used, not by hacks, but eventually by automobile travelers visiting the mountain top or crossing over into North Carolina. The road was typical of the period, best described as a rough terrain dirt and gravel trail. Interestingly, it was a one-way toll road, up the mountain in the morning and down in the afternoon.

When Highway 143 was constructed during the 1950's, the Hack Line Road passed from the scene. Most of it was paved over or simply obliterated by development. Today, all that remains of the original road is a 3.5 mile segment within the Cherokee National Forest, located between Carvers Gap and the beginning of Burbank Road. Though its length has been diminished, what remains of the original road is no less beautiful and the scenery no less spectacular than was described in the Cloudland Hotel advertisement quoted above.

The road has been a favorite of generations of hikers. My own introduction to its beauty and botanical treasures occurred during the 1993 Fall Naturalists' Rally when I participated in a group hike on the road. The hike was led by the late Arthur Smith, longtime Naturalists' Rally hike leader, who with a sprinkling of charm and wit, expertly identified numerous plant and tree species which inhabit different elevations as the road meanders down the mountain. During this hike I asked Arthur if the road was an "official trail" of the Cherokee National Forest trail system. He told me it was not. When I asked him why it was not, what seemed an unusually long period of silence followed as Arthur contemplated an answer to my question. Finally, he replied, "I don't know. Why don't you and I work on it?".

And so began the seven-year "campaign" to secure trail designation for the historic road. The project included the usual letter writing, enlisting the support of other individuals and groups, notably The Southern Appalachian Highlands Conservancy, State of Franklin Group, Sierra Club and Friends of Roan Mountain, and meeting with Forest Service personnel. All this effort produced limited results. Although Forest Service officials expressed interest, even approval in concept, the project was considered low priority. This changed, however, with Terry Bowerman' s appointment as District Ranger of the Nolichucky/Unaka Ranger District. On February 25, I met with him to discuss the proposal. Having a strong interest in history and archaeology, he immediately and enthusiastically embraced the idea. Then on March 21, I was privileged to escort Terry, his assistant Cheryl Summers and two Forest Service technicians on a hike down the road. The purpose of this outing was to familiarize Terry and his staff with the road and to identify what needs to be done to bring the road up to Forest Service trail standards. Not long after, the road was removed from the road inventory and designated the "Hack Line Road Trail". Forest Service plans include some trail restoration work, trailhead parking at the upper and lower ends and the construction of a spur trail to the Twin Springs Picnic Area on Highway 143.

The Hack Line Road Trail will be featured in an article to be written by Bob Fulcher, Tennessee Department of Environment and Conservation, which will be published in the May/June 2001 issue of the *Tennessee Conservationist*.

Dan Russo, member of Friends of Roan Mountain, will be leading the Arthur Smith Memorial Hike (an all-day hike on the Hack Line Road Trail) on Saturday at the Fall Rally.

Friends in Action

---- Gary Barrigar

A little more than three years ago a small group of individuals met at Roan Mountain State Park with an idea - to form an organization to support naturalists' activities on Roan Mountain (The stated purpose of this organization is to "foster a greater awareness and understanding of the natural, historical and cultural significance of Roan Mountain.") Since that time the idea has grown to a realization with 137 memberships, a very pro-active board, a charter from the state of Tennessee, a web page, a newsletter and enough where-with-all to provide support for naturalist activities, including both Naturalists' Rallies.

The Naturalists' Rallies have prospered with the support of the Friends of Roan Mountain. Attendance is up, the number and scope of the hikes have increased, and the evening programs presented by expert naturalists in their fields continue to be top notch.

The fall rally promises to be the best ever! We have added eight new hikes. Ed Schell will exhibit his work in the Convention Center during the rally. The author of my favorite book about nature, Hollows, Peepers, and Highlanders: an Appalachian Mountain Ecology, George Constantz, is Friday night's speaker and Tennessee Wildlife Resources Fisheries Biologist, Bart Carter, who has led our fish trip for the past few years will be the Saturday night speaker. If you have ever been on one of Bart's collecting trips, you know what an interesting speaker he is!

The accomplishments of Friends of Roan Mountain would not be possible with you, the members, and the support you provide. If you have suggestions or would like to help either with the organization or the rallies, please contact me or any board member.

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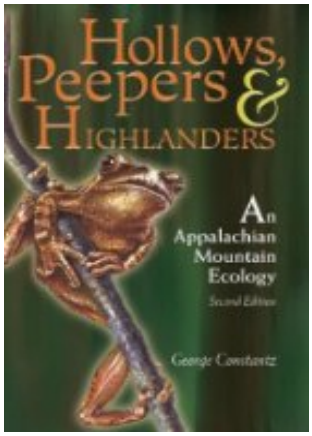
My Upcoming Visit

– George Constantz



I'm looking forward to meeting you on Friday and Saturday, September 8 and 9, 2000. Although the official reason for my visit is to give a program Friday evening, a big juicy carrot for me is the anticipation of learning a lot of Appalachian natural history from you.

Let me whet your appetite about my upcoming program. In my slide-illustrated talk, I'll give a broad sweep of Appalachian origins, the general reasons for our high biodiversity, and then focus on specific vignettes about the life histories and behaviors of wildflowers, salamanders, birds, and other critters, all being played out in shady hollows and isolated ridges. A common thread through my talk will be an evolutionary perspective, more specifically a neo-Darwinian interpretation of the traits of living things.

Some of the specific topics I'll cover include: the origins of balds, sex change in the jack-in-the-pulpit, aggressive mimicry of fireflies, and territory defense by salamanders.

Here's a seasonally timely story from my book, Hollows, Peepers, and Highlanders: an Appalachian Mountain Ecology, which will give you an idea of the kinds of stories I'll be sharing with you.

The tent caterpillar is just one of thousands of species of Appalachian moths whose larvae eat tree leaves. Damage by insect herbivores can decrease a tree(s growth, seed production, and seed viability.

Trees seem so vulnerable (they are a large target, rooted to one spot, without a fly-swatting tail. Yet by hook or by crook trees persist.

In the tree-caterpillar arms race, insects would appear to have the edge. How do trees persist in the face of rapidly evolving pests?

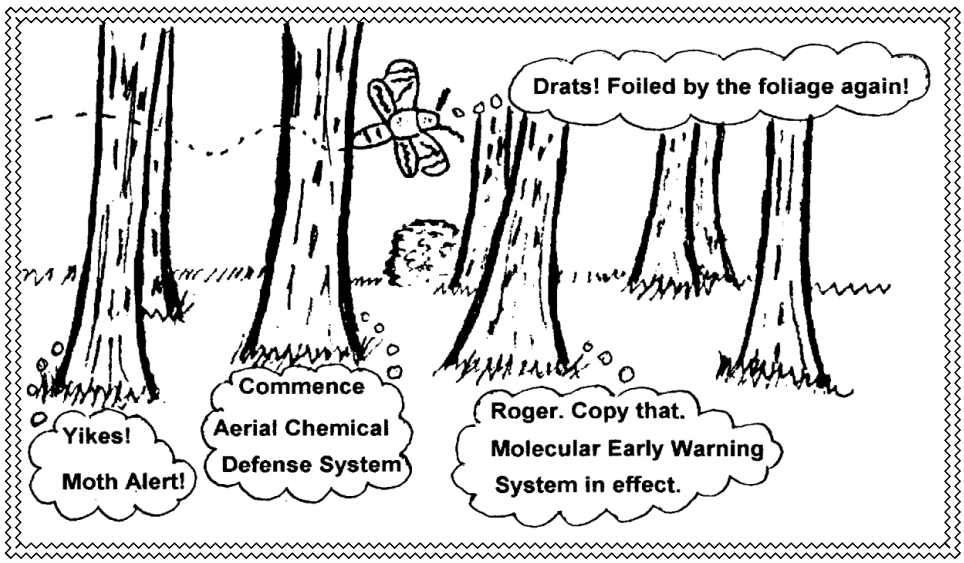
We have recently discovered that trees deploy sophisticated chemical defensive weapons. For example, oaks produce tannin, an organic compound used in the process of tanning leather. When ingested as part of mature oak leaves, tannins bind ingested proteins into unusable complexes that inhibit the growth of moth larvae.

In Vermont, leaves of red oaks that had been defoliated by gypsy moth larvae two years in a row were drier, tougher, and had a higher concentration of tannins and phenolics, another natural insecticide, than leaves of undamaged trees. Some moth larvae grow more slowly, produce smaller pupae and fewer eggs, and decline in vigor when they eat leaves of such defoliated trees.

These observations suggest that trees engage their antiherbivore defenses fairly quickly. A wide variety of plants rapidly mobilize defenses in surrounding leaves and tissues after an herbivore bites. Some plants are induced to synthesize toxins that poison herbivores; others produce complex compounds that interfere with the attacker(s growth cycle or

digestive ability. One type of inducible defense works as follows. After a plant is attacked, it releases yet unknown substances from the wound. These chemicals disperse throughout the plant and stimulate the production of molecules that impede the breakdown of protein molecules in the insect(s gut. This makes poor food of the plant(s leaves.

In Finland, biologists were studying inducible defenses in white birch being defoliated by the autumnal moth. The Finns made an astounding discovery. The growth, survival, and egg production of moths correlated positively with the distance between their food tree and the closest birch defoliated the previous year (the farther their food source was from the previously defoliated birch, the more successful the moths were. Incredibly, this suggested the presence of aerial chemical communication among nearby trees. A similar phenomenon has been reported in some trees of northern Appalachia. The possibility of a molecular early warning system among trees is being hotly debated among forest ecologists.



There, now that you've read that, I challenge you to hike your favorite trail. I expect you'll look at your local forest in a new, even unsettling, way.

I'll close my talk by sharing my personal view of Appalachia(s greatest environmental problems. I'm an interactive teacher, so help me feel at home by asking questions and challenging dogma. Oh, I can't miss this opportunity: I'll have copies of Hollows available for sale and signing.

See you soon,

George Constantz
High View, West
Virginia

Tennessee's Aquatic Resources

— Bart Carter

Tennessee is fortunate to have an abundance of water within its political boundaries. Statewide there are approximately 17,000 miles of warmwater streams, 2,200 miles of coldwater streams (free flowing streams and tailwaters), and 32 man-made reservoirs encompassing about 500,000 acres.

The diversity of aquatic habitats in Tennessee can be attributed to the geographical diversity spanning the state from east to west. Six distinct physiographical provinces dictate aquatic fauna occurrence and diversity found across the state. These geologically different provinces include the Blue Ridge, Ridge and Valley, Cumberland Plateau, Highland Rim, Nashville Basin, and the Coastal Plain. This diversity in geology along with five major drainage basins, results in the tremendous assemblage of aquatic animals we enjoy today.

Tennessee Wildlife Resources Agency Region IV (east Tennessee) has 5,470 miles of streams that total approximately 14,000 acres in 21 east Tennessee counties. Approximately 800 are miles classified as coldwater streams. Except for a few Cumberland River System streams in Anderson, Campbell, and Claiborne counties Region IV streams are in the Ridge and Valley and Blue Ridge physiographic provinces of the upper Tennessee River drainage basin. The main river systems in the region are the Clinch, Powell, Little Tennessee, mainstream Tennessee River, French Broad, and Holston.

The fish fauna of Tennessee is the most diverse in the United States, with approximately 297 species of native fish and about 26 to 29 introduced species

Tennessee is also fortunate to have approximately 120 species of freshwater mussels (second only to Alabama), 76 species of crayfish, and supports one of the richest assemblages of aquatic insects in North America.

Streams and rivers across the state are of considerable value as they provide a variety of recreational opportunities. These include fishing, canoeing, swimming, and other riverine activities. Streams and rivers are also utilized as water sources both commercially and domestically. The management and protection of this resource is recognized by Tennessee Wildlife Resources Agency and has been put forth in the Strategic Plan as a primary goal.

Update: State Plans to Revoke Permit of Avery County Mining Operation On Belview Mountain

The N.C. Department of Environment and Natural Resources admits it made a mistake when it issued a permit for a gravel mine near the Appalachian Trail. Now the state appears to be putting the brakes on the controversial mine. The Division of Land Resources told the quarry's owner that it intends to revoke the mining permit. "The public meeting had a lot to do with the decision to issue the intent to revoke. The residents brought up a lot of concerns that we weren't aware of," says Johanna Reese of the DENR. Things really heated up after the public hearing March 16 in Newland. It appears the state has heard the opposition loud and clear.

The notification from the state does not mean the mine will ultimately lose its permit. Clark Stone Company, the owner of the mine, will have an opportunity to meet with state officials in order to discuss possible modifications to retain the permit.

Meanwhile, work continues on Belview Mountain, and opponents say the fight is far from over. "We will not rest. We want quiet on that mountain for the Appalachian Trail and for the adjoining land owners. And we want that mountain put back in the state it was before the mistake was made," says Jay Leutze, chairperson of Concerned Citizens To Protect Belview Mountain. No timetable has been set for the mining company to respond. [Source: Jay Jennings WRAL5 Online 7/01/00]