In 2008, 34 Angora goats made Roan Mountain’s grassy balds along the North Carolina-Tennessee state line their summer home. Roan, lovingly called the “crown jewel of the Southern Appalachians,” is home to more than 800 plant species, 27 globally-rare plant communities, and has the highest concentration of rare species found along the entire A.T. The goats are part of a volunteer effort for protecting and maintaining the grassy balds.
Roan’s grassy balds are dying due to a variety of factors including woody plant invasion resulting from the lack of large herbivores.

The Southern Appalachian Grassy Balds are globally rare, critically imperiled plant communities with a global rank of G1, the rarest ranking available. They are unique with only one to five occurrences in the world, and Roan has the world’s premier examples. While their origins are enigmatic and lost in antiquity, we know they were here before Europeans settled the area. They provide habitat for numerous rare species and are aesthetically pleasing to the thousands of visitors who come for their great views, invigorating air, wildlife watching, and dramatic wildflower displays.

Roan’s grassy balds are dying due to a variety of factors including woody plant invasion resulting from the lack of large herbivores (including livestock, elk, buffalo, and potentially mammoth and mastodon in ages past) as well as changes in climate, soils, and pollution. Estimates suggest that more than 75% of Roan’s Grassy Balds have disappeared in less than 100 years with most of the loss occurring in the last 50 years when the livestock that replaced the native animals the early Europeans extirpated were themselves removed from the balds. Unlike some other bald types, there is no good evidence that fire either created or maintained Roan’s Grassy Balds. Peter Weigl and Travis Knowles proposed the “Post-Pleistocene Mega-herbivore Theory,” our best working hypothesis for why they have persisted. In short, it proposes that large herbivores were keystone species maintaining the balds after the natural tree line moved north, following the last ice age.

The Baa-tany Goat Project uses goats as a surrogate for the absent herbivores while also scientifically studying the process. It is an experimental management tool operating under a special

Goats were chosen because they prefer woody plants rather than grass. The paddocks are constructed of moveable, solar-powered, electric fencing, which is packed in and out.

Photos by James Donalson
Goat adopters get naming rights, an adoption certificate, a picture of their goat, and a lock of its hair.

Funds are used for travel, supplies, equipment, vegetation studies, and data management.

use permit and volunteer agreement with the USDA Forest Service. Goats were chosen because they are browsers (they prefer woody plants) rather than grazers (grass eaters). The goats are restoring a natural process that has generally been lacking on the mountain for decades.

2008 kicked off the first year, with the goats browsing on the balds for 93 days. Angoras are a fiber goat (source of mohair) rather than a meat or dairy goat. More than half of the goats were donated by a Virginia woman who preferred giving her friends a retirement plan rather than sending them to the market.

Todd Eastin, a partner in this project, wanted. They were in seven paddocks totaling about six acres. The paddocks are constructed of moveable, solar powered, electric fencing, which is packed in and out.

Canada blackberry is the main target. It is a deciduous, woody shrub with a very extensive root system (most of its spread on Roan is by roots rather than by seeds). While it is native to the mountain in other habitats, it was not on the list of plants recorded in the grassy balds in the 1930s. The war on the blackberry is a war of attrition: one year of goats will not get rid of them, but multiple years will cut off their energy sources and exhaust their root systems. We estimate it will take three to five years of browsing in a given area to reduce the blackberry to acceptable, low levels. After that is achieved, we will still be faced with maintaining what is restored through a long-term rotational browsing system. The long-term rotational browsing system would skip areas that were restored for a few years in favor of treating new areas, then return to the restored areas to bear the blackberry back down again. In theory we could always be browsing areas that were browsed in the previous year(s) as well as getting into new areas.

Several studies in progress evaluate the effectiveness of using goats for grassy bald restoration. Permanent study plots assess overall plant diversity and coverage changes as well as effects on the rare Gray’s lily. These plots also allow us to make comparisons with data collected in the 1930s and 1980s. Photographs help illustrate the effects the goats have on the community.

While this is a volunteer led project, it is a collaborative effort involving numerous individuals, agencies, and organizations due to the profound significance of the mountain. Partners include the Appalachian Trail Conservancy, USDA Forest Service, Friends of Roan Mountain, U.S. Fish and Wildlife Service, North Carolina Natural Heritage Program, Tennessee Division of Natural Areas, Southern Appalachian Highlands Conservancy, Tennessee Eastman Hiking and Canoeing Club, the Nature Conservancy, and many others whose contributions are invaluable. In 2008, more than 100 volunteers and partners put in more than 2,700 hours with an “in-kind” value exceeding $95,000. Funding has so far come from three main sources: North Carolina A.T. License Plate Grants, significant anonymous contributions, and the “Adopt-a-Goat Program” sponsored by the Friends of Roan Mountain. Goat adopters ($20 per month; $10 per summer) get naming rights, an adoption certificate, a picture of their goat, and a lock of its hair. Funds are used for travel, supplies, equipment, vegetation studies, and data management.

For 2009, we plan to have about 50 goats on the balds by mid-June and stay through the end of the growing season. This includes most of last year’s goats and the 17 kids born this year. The browsing paddocks will be expanded and we hope to add a livestock guard animal or two (most likely Great Pyrenees dogs). Visitors are welcome to see the goats, but are reminded to stay on the marked trail, beware of the electric fence, and keep any dogs leashed.

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For more information visit:
www.friendsofroanmtn.org
baastanygoatproject.blogspot.com

Goats and other pack animals are prohibited on the A.T.
In 2006 the Appalachian Trail Conservancy (ATC) was contacted by Ecodit, a firm with offices in Arlington, Virginia, and Lebanon that works on sustainable economic development, and asked to apply its trail-design and organizational development skills to help bring to fruition the Lebanon Mountain Trail (LMT). ATC’s executive director Dave Staatzell along with A.T. maintainers and former ATC board members David Field, and Marianne Skeen volunteered to travel to Lebanon to advise on the development of the LMT. ATC has long been called upon by other trail groups in the United States for advice on private and public partnerships that protect natural and recreational resources, but this invitation emphasized the organization’s international reputation as a model of cooperative management. The Lebanese government and U.S. Agency for International Development (USAID), who were already involved in preserving the Cedars of Lebanon reserve areas and other conservation projects, sought to develop outdoor-recreation opportunities and other ecotourism attractions in the Lebanese countryside. The LMT would pass through cedar reserves, which contained trees that dated back 3,000 years. It would also pass through villages where funding from the project would help to restore or construct simple lodging facilities. Cultural and historic sites along the way would be highlighted, and local festivals would be part of the trail experience.

Walking along the LMT below Mount Hermon (Arab name: Jebel Sheikh), which peaks at 8,800 feet.
IT TAKES DETERMINATION AND A COMMON SENSE OF PURPOSE TO GO FROM DREAMING UP

the idea of a trail connecting Lebanon’s high-mountain villages, to developing a workable concept and convincing proposal for such a trail, not to mention receiving funding for implementation from the USAID and establishing the trail in a record two-year span (2006-2008). ECODIT and its local and U.S. partners—in particular ATC—can rejoice for being part of the extraordinary LMT adventure.

A key milestone in the LMT adventure was reached last April, when a team of six hikers walked the entire 275-mile trail from north to south. They met wonderful people, enjoyed beautiful landscapes, watched flocks of storks and raptores fly overhead on their spring journey north to Europe, took in the colors and scents of diverse flowers and budding trees and stayed in local guesthouses where they experienced Lebanese hospitality at its best.

During the weekend of April 25-26, three-dozen people joined the hikers to walk a section of the LMT from Niha to Jezzine, then to Aitanit. Most came from Beirut; others had flown in from Milano, Paris and California. I had joined the group Friday evening, coming straight from the U.S. to participate in the last six days of the first LMT thru-hike.

On Saturday morning the group of hikers gathered in Niha for the hike to Jezzine. Within an hour we were at the peaceful Druze Shrine, about 1,000 feet above the sleepy town of Niha. We stroll south on an extended plateau of green, grassy fields teeming with wildflowers and honey bees, with Mount Niha as backdrop to the east. From there, the trail led us to the magnificent Fakhredinne Cave. At dinner that evening the group ate, drank, and danced. On Sunday morning we began our upward hike with a delightful hour-long stroll alongside the Azzibeh stream, which has carved gullies in its bed; and orange-flower scents in the direction of Marjaayoun.

Our hosts received us with a big, heartfelt Ahlan wa sahlan (welcome in Arabic), Lebanese coffee, lemonade perfumed with orange flower water, and sfouf (homemade sweets). After two long days of scenic hiking in olive-country from Aitanit to Rashaiya, and from Rashaiya to Hasbaya, the group left Hasbaya and its orange-flower scents in the direction of Marjaayoun, where they received a heroes’ welcome.

THIS FIRST LMT THRU-HIKE INJECTED A PRECIOUS $15,000 INTO trail-side communities, demonstrating the unlimited economic opportunities offered by the LMT. But the main challenge will be to protect the trail. Concerned Lebanese are mobilizing to do so by helping the young LMT Association to fulfill its mandate to “protect, maintain and promote the LMT.” Leading the pack, Mayor Najem has already included the LMT in the Urban Development Plan for Aitanit, a bold action that other municipalities and elected officials are invited to emulate. As the LMT brings the Lebanese people closer together, it is also a bridge to friends of Lebanon around the world. In the United States, a non-profit organization, the American Friends of the Lebanon Mountain Trail (AFLMT), was recently established. The AFLMT will strengthen ties with Lebanese Americans and with American hikers seeking memorable, authentic experiences.

Joseph Karam is the president of ECODIT and also serves as the president of the American Friends of the LMT.

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For more information visit:

www.lebanontrail.org or contact the AFLMT at:

affmt@lebanontrail.org

Above: The Shef f fort (Niha fort) dates back to the Crusades; the entire complex was carved out of the rock face.

Below: Crossing the Hasbani River on the very last day of hiking the LMT before reaching the final destination, Marjaayoun.
In south central Vermont, an immense fold of billion-year-old rock rises to form a broad forested plateau strewn with glistening ponds and lush wetlands. Above, the ancient rock is mantled by the evergreen-bedecked ridges and rocky summits of the Green Mountains. To the west, the folded and cleaved slates of the Taconic Mountains bind a narrow valley. In this valley, atop broad bands of marble, lies Rutland.

Rutland was chartered in 1761 as one of the New Hampshire Grants. The first settlers arrived in 1770 led by Colonel James Mead. In the early 1800s marble deposits were first unearthed in Rutland, and in the 1830s extensive deposits of high-quality marble were discovered. Within a decade small firms had begun excavations. After the railroad arrived in 1851 these quarries began to turn a profit. Marble fueled enough growth and investment that when Rutland was incorporated as a village in 1886, quarry owners ensured the district that contained the bulk of the marble was split off to become West Rutland and Proctor. In 1892, portions of the village and town of Rutland were incorporated as a city, and the remaining town of Rutland that encircled it was primarily rural.

Today, visitors to Rutland can see this history in Rutland’s Downtown Historic District, especially in the buildings constructed of or embellished with local marble. Merchant’s Row, a restored street that dates back to the 1870s, was then one of the most prominent streets of commerce in New England. Main Street Park,
once the site of the courthouse jail, now teems with activity during the summer months. All told, more than one hundred buildings in Rutland are listed in the National Register of Historic Places.

Rutland’s history abides in the nearby mountains as well, especially Killington Peak, the highest point in southern Vermont. In 1879 a government signal station was erected on Killington. The road that ascended the western flank of the mountain to the installation was soon employed by local entrepreneurs who used it to construct a hotel. Another trail to the summit was soon cut from the east. For the rest of the century, Killington was an oft-climbed peak. When the popularity of the hotel declined, shortly after 1900, the structure was abandoned, soon to fall apart and disappear.

Although the hotel’s glory days were short-lived, Killington Peak is still a hiker’s favorite. An extensive web of trails centered on the Long Trail and Appalachian Trail systems also offers many other options, including outings well suited for all ages and abilities. Group outings led by members of the Killington Section of the Green Mountain Club are a fine way to explore local trails and learn more about the region.

Not to dissuade you from exploring Rutland’s many fine eating and drinking establishments on your own, but you can’t go wrong by starting your day with a freshly brewed cup of Café Terra’s house blend coffee, or stopping at the Back Home Again Café for a wrap. For those of you on the Trail and looking for a night’s rest, the Back Home Again Café also operates a hiker hostel.

During the summer months, there are free concerts on Wednesdays and Sundays under the gazebo on the green. On Tuesdays and Saturdays you can talk to local farmers and artisans about their foodstuffs and wares at the farmer’s market in Depot Park. On Fridays, Merchant’s Row is transformed into an open air market offering delectable food from downtown restaurants, art being created and displayed, and a diverse array of music.

In August Rutland’s festival season commences with the Long Trail Festival, a celebratory gathering that offers outdoor activities, the best in local music, educational presentations, opportunities to “give back” to the trail, and lots of family fun. Now in its third year, it is quickly becoming an essential sojourn for hikers hoping to renew old friendships and make new ones. Art in the Park, which features fine art, crafts, music, and art and craft activities for children, has two appearances, one in August and one in October. The Vermont State Fair returns to the state fairgrounds every September.

All in all, the qualities that make Rutland a favored stopover town among the thru-hiking community top the list of traits that make it a great place to visit: a compact downtown with pubs, restaurants, and other services within easy walking distance and ready access to trails. Add fairs and festivals, local artisans, seasonal foods, and live music to the mix and you have the makings of a fine hiking holiday.

For more information visit:

www.rutlandvermont.com