It's easy to see why conservationists like Jay Leutze of Minneapolis, North Carolina can't stop talking about the recently created Yellow Mountain State Natural Area in the Greater Roan Highlands in Avery and Mitchell counties.

At the moment, I'm trying to keep stride with the tall and lean trustee of the Southern Appalachian Highlands Conservancy (SAHC) while he marches over limbs and branches fractured from gnarled and lumpy sugar maples. The fallen appendages are a consequence of one of the fiercest winters in decades and the misshapen trees an accumulation of decades of volatile climate. All the while, Leutze is in full throttle identifying rare plants and explaining the unique ecology of northern tree species in the south, such as the sugar maple, with the gusto of an inventor on the verge of a breakthrough. Beyond the grove of hardwoods the forest abruptly ends and a stiff and steady April wind, unbroken by a grassy meadow, whips away my baseball cap. After a gradual incline the knob broadens and the view opens. We're standing on the grassy bald of Big Yellow Mountain and from 5,500 feet the vista is unmatched and an evident reason for Leutze's elation.

Our view from here is a window to a much larger area and inspired an ambitious effort to engage in one of the most substantial conservation projects in the Carolinas in decades by linking some of the state's most threatened ecological communities. Though Big Yellow Mountain bald is not part of the Yellow Mountain State Natural Area (YMSNA) (it was acquired by the North Carolina Chapter of the Nature Conservancy in 1975 and managed jointly with SAHC as the 395 acre Big Yellow Mountain Preserve), both are within an area that land managers and conservationists refer to as the Greater Roan Highlands Landscape (GRHL). The roughly 65,000 acre GRHL project area encompasses a mosaic of private and public land holdings that includes one of the richest collections of biodiversity on the planet. In all, the area is home to 27 rare plant communities; 180 known bird species, several of which are rare breeding species, such as the threatened migratory golden wing warbler and the northern saw whet owl; as well as other unique fauna such as the federally endangered Carolina northern flying squirrel.

Yet, what sets this conservation project apart from others is, since 1974, more than 20,000 acres within the GRHL have been permanently protected through a collaborative effort of local residents, conservation groups, the US Forest Service, the NC Wildlife Commission, and now, the North Carolina State Park System. That achievement may be the derivative of an enlightened approach to land conservation that involves a concern not just for the longevity of the landscape, but for the continuity of the livelihoods of its residents. "There's a history of taking advantage of people in Appalachia," says Leutze. "There’s a suspicion of outsiders with new ideas of what you should do with your land."

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The peaks of the Roan Highlands -- because of the abundance of high elevation habit, and recreational and scenic value -- have been on the radar of conservationist for decades. In the 1950's, a committee of the Appalachian Trail Conference (now the Appalachian Trail Conservancy) began an effort to relocate dozens of miles of the Appalachian Trail (AT) in order to string together the area's famous balds. That endeavor inspired an explosion of appreciation

for the area. Though not just from conservationists. As early as 1951 there was a proposal to build a ski slope and tow on Roan Mountain. It never transpired, but other development followed. In fact, Leutze's family built a cabin in 1972 near Big Yellow Mountain when Jay was eight years old.

Leutze, who made the cabin his full-time residence in 1993 and has a law degree, is now an expert on high elevation conservation projects. In the mid 1970's, he recalls gatherings in his family's cabin to discuss the protection of some of the unique places in the Roan Highlands. However, he has one distinct memory that launched his career as a conservationist: as a teen, he recalls the view from the cabin's porch as the curvy knob of Little Sugar Mountain was transformed into a white shoe box; the construction of the ten-story 320-unit Sugar Top resort. "I watched those cranes go up," says Leutze who was inspired to join several conservation organizations and commenced a letter writing campaign. "I think many conservationists were born in the shadow of that building. It really galvanized public opinion for what was at stake." In 1984, the state of North Carolina passed a ridge law regulating the size of buildings on mountain crests. Still, the development at Little Sugar and other sub-divisions began to alarm local residents and conservationists as the landscape and use of mountain land began to transform.

While the precise origins of Big Yellow Mountain's dome and other high elevation grass balds in the Roan are debated, the harsh wind I experienced this past spring is an evident force. Another hypothesis (Weigl & Knowles, 1995) suggests that sloths, mammoths, mastidons and other mega-herbivors, extinct for eons, may have helped. The evidence is the un-earthing of 10,000 year old remains in Saltville, Virginia that are within two hundred miles of all known southern Appalachian grass balds - suggesting that these massive creatures with enormous strength and a large range of movement chomped away at the vegetation and maintained their openness. I'm trying to imagine a giant sloth flexing its fearsome claws, but the truth is, I'm only slightly more likely to behold a whet owl, which may go the way of the giant sloth. The whet owl, which nests in the spruce fir and northern hardwood forests such as the sugar maple grove at the edge of Big Yellow Mountain bald is in peril due to a dwindling habitat. While it's far too late to save the giant sloth, species like the whet owl - which is on the North Carolina list of threatened species - stand to benefit if their habitat is improved and expanded.

Although the giant herbivores were extinguished (perhaps hunted by humans), their shoes may have been filled by other grazers such as elk and bison who flourished until their own demise two or three centuries ago. On Big Yellow, the Hoilman family of Avery County has been doing the work since. Ted Hoilman, who is 68 years old and one of eleven siblings, says his family has been grazing cattle atop the grassy bald for four generations and they continue to do so under an arrangement with the Nature Conservancy (TNC) and SAHC. While the Hoilman’s cattle help keep this bald from being swallowed up by hawthorn trees, blackberry, and other small shrubs, the arrangement represents a critical partnership between conservation organizations, locals, and private land owners in conserving unique spaces. "The Hoilmans know every plant here. They know how this land has changed," TNC's Mountains Project Director David Ray explains. "They know it in a way that we can't."

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From the grassy ridge of Big Yellow, an all star line up of North Carolina famous peaks are in view: Grandfather; the Black Mountains; Linville Gorge's beacons, Table Rock and Hawksbill. In spite of those obvious landmarks, the geography of the GRHL is a bit confusing; for instance, the high peaks that comprise Roan Mountain may be referred to as the Roan massif; the Highlands of Roan; or just the Roan - though not to be confused with Roan High Mountain or Roan High Bluff which are specific peaks on Roan Mountain. And there are other numerous geologic features and peaks with virtually identical names: Big Yellow Mountain; Little Yellow Mountain; Yellow Mountain Gap; and umpteen knobs labeled Yellow Mountain throughout the southern Appalachians (the color is possibly in reference to the blooms of the tulip poplar or perhaps the jaundiced appearance of the balds in winter). Yet, the primary features of the southern Appalachians in western North Carolina are clear. There are two long, relatively narrow corridors of protected land divided by development, running parallel from southwest to northeast: the protected lands along the NC/TN border and the corridor that runs along the eastern Blue Ridge escarpment, the geological delineation where the mountains end. Although they come unusually close to each other in Avery and Mitchell counties, seldom are the two corridors connected by continuous forest; as if two sides of a ladder without the rungs.

So in response to increasing development pressure for second homes and other development, conservationists and land managers attempted to establish conservation priorities in the Roan Highlands in the 1980's. Later, in 1999, additional ecological data about the landscape was collected to further refine ecological priorities. In that assessment it was suggested that rare animal and plant species assumed to be exclusive to the higher elevations may have a broader habitat, suggesting that the Roan ecosystem was more extensive than they had originally imagined. Then, in 2006, the North Carolina State Natural Heritage program (the statewide inventory documents the status and distribution of rare plants and animals in every county) studied portions of Avery County south of the traditional Roan Highlands project area. What they found was a game changer. "We realized that there was much more at stake," says Leutze.

The inventory provided evidence that species reappeared, as suggested, in places that they didn't expect. There was, he explains, a rare opportunity to plug the gap - that is, to link the two primary corridors of protected land. For wildlife, such as the whet owl or the flying squirrel, the more contiguous the forest the larger their habitat, the more likely they are to roam freely and thrive. At the same time, residential development pressure was starting to approach what had until then been considered too remote. That understanding added urgency to the project since the fragmentation of the landscape can inhibit its ability to act as an ecological whole. It became obvious that they needed to expand the scope of the traditional boundaries of the Roan Highlands – which is when the current Greater Roan Highlands Landscape (GRHL) project area was defined and expanded to its current range of roughly 65,000 acres.

Also in 2006 the SAHC was awarded funds from the Wildlife Action Opportunities Fund that was used to support planning and to further identify and highlight habitat priorities in the expanded project area. "Part of our thinking was to use the information to shed light on the value of the area and provide another tool for planners," says SAHC director Carl Silverstein. But a brand new strategy with broad support emerged: an interest in pushing for a state designation. Partnering with Raleigh would open doors and access to other sources of funds, such as the state's Natural Heritage Trust Fund and the Parks and Recreation Trust Fund. North Carolina

Senator Joe Sam Queen was the primary sponsor of a bill to create a state natural area that would include a portion of the GRHL project area, including the new conservation priorities, and in August, 2008 former Governor Easley signed the bill to authorize the creation of the YMSNA (it also created the Bear Paw State Natural Area, also in Avery County though not within the GRHL).

The State Parks Act of 1987 delineates six types of units of the system including state recreation areas, state trails, and in this case, a state natural area; its focus is on the preservation of biological resources rather than recreation. The legislation creating the YMSNA doesn't establish boundaries; rather, it authorizes the state to begin planning in what is roughly a several thousand acre study area. Carol Tingley, the Deputy Director for the Division of Parks and Recreation, explains that the act has no affect on land owners, adding that the state has yet to acquire any land. "The state parks have no regulatory or management authority over private land," she says. "Technically, the legislation authorizes the creation, but does not give us any land. Mainly we're working with people who are ready to sell their land. Our hope is that they sell to us at market value rather than developers since it will permanently protect the land." While the state hopes to add a trail system, Tingley says don't expect a ribbon cutting any time soon, since it could take years, even decades, to implement the YMSNA plan and will depend on the availability of suitable tracts of land. However, the immediate benefit of the state designation is that it will provide more resources to help acquire, preserve, and improve vital blocks of forest in the expanded project area.

Ray of the Nature Conservancy points out there is still potential for acquisition of places that have a high conservation priority, such as the 466 acre pinnacle of Little Yellow Mountain acquired by TNC in November 2009 - a vital link in the ecosystem that helps provide a safe corridor for wildlife. However, within the YMSNA and the broader GRHL project area it is assumed that the land will continue to be held and managed by a patchwork of ownership forms, including federal and state governments, conservation trusts, and in private hands. "Conservation is more than just acquiring pieces of land," says Ray, who along with Leutze and the state's park system are adamant that their organizations work with willing land owners only.

"Initially they [private landowners in the Roan] saw us as outsiders," admits Leutze. "They saw us as another developer." But as development pressure mounted, first, the ski boom and then the surge of second homes, people have increasingly viewed conservation groups and public land managers as allies. "People were becoming concerned about losing the way they've related to the landscape for generations." Leutze describes his strategy as an old fashioned on the ground approach, going from community to community and gradually building relationships. And despite the ecological importance of the area, the strategy involves paying close attention to the cultural and economic landscape of the land too. "Our approach really involves reaching out and including those that are typically left out of land decisions," he adds. "We've become better at the human element of what the land means to people."

So in the mid 1970's, when Ted Hoilman realized that his grazing access to the grassy bald was in jeopardy, he reached out to conservation groups. "At first I didn't know what they were about, but I wanted the land to stay as it is," says Hoilman, whose knowledge of the landscape has helped shape how it is managed and has been instrumental in helping conserve other key tracts

of land. Recently, for example, he contacted conservation groups about a 63 acre tract of land for sale in Roaring Creek, the watershed and community that flows from Yellow Mountain Gap. Since the acreage is surrounded by national forest; is a corridor of the Overmountain Victory National Historic Trail; and has a healthy population of native brook trout, it was an ideal tract to conserve. In this case, the sellers favored dealing with a conservation group. That enables the former owners to continue to have access to the land - for grazing, hunting and fishing, or picnics - whereas a transaction to a developer can potentially close them out of the landscape. And that's just it: at the heart of the strategy is preserving people's ability to continue to use the land. "Our lesson is that we found we share many of the same concerns of what you lose when land use changes so radically," says Leutze. "We've discovered we have the same goals of people that have been here for generations."

And at the same time, one of the glaring accomplishments of the four decade old project in the Roan Highlands is that, in addition to maintaining traditional land uses, it has opened up and preserved a vast and unique ecosystem, including Big Yellow Mountain to the public. "It's the most beautiful place I've ever been," says Hoilman about the bald. "When my grandchildren go up there I want it to look the way it does now."

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