

Southern Appalachian Creature Feature Podcasts

Goats on Roan

Good morning and welcome to the Southern Appalachian Creature Feature. This week, we'll look at a curious project to protect one of the Southern Appalachians' most important natural areas.

No mountain in the Southern Appalachians goes above tree-line – the elevation above which conditions become inhospitable for trees, yet we have mountains without trees on their peaks. Instead of forest, these peaks are covered with grassy fields, known as balds, offering some of the most spectacular views in the region. For Southern Appalachian hikers there may be no more perfect place to rest your legs, grab a bite to eat, and be still in the magnificent landscape. Not only are they beautiful places to hike, but they're also home to several rare species, including the rich red and black-speckled Gray's lily.

A pair of mysteries goes along with these grassy balds. First of all, how were they created? Were they cleared of trees by Native Americans or wildfire, did disease kill off the trees, or were they toppled by an ice or windstorm? Beyond that, the question remains how they've remained open grasslands, instead of reverting to forest. While some of these balds were created by humans in the past few decades, some have existed for hundreds of years. What could've kept trees from growing on these spots for so long?

One argument contends these areas were kept clear by herbivores like bison and elk. As European settlers moved in and these animals began disappearing, perhaps their role on the grassy balds was replaced by domestic livestock? Today, most grassy balds are on national forest or parkland, and they're threatened not with development, but by the growth of woody vegetation. Allowing these areas to become overgrown would mean not only losing the beautiful vistas, but also an important, and rare, natural community.

One of the largest, and most biologically important grassy balds is Roan Mountain, on the North Carolina-Tennessee state line. This summer, hikers there might see something a little unusual. Jamey Donaldson, a researcher with a long history of interest in Roan Mountain, will be browsing goats on Roan's grassy balds. Jamey's goats are part of an experiment to see how browsing affects the woody plants and the overall diversity of plants.

Choosing goats because they prefer woody plants over herbaceous plants, Jamey will establish a number of research plots across Roan Mountain. He'll set up a temporary paddock for the goats and let them browse to a pre-determined level before moving on to the next paddock. Tracking how much the goats have browsed, Jamey will compare how much woody vegetation coverage existed before and after the browsing, and how the vegetation communities change.

With this information, land managers can get a clearer picture of how herbivores may have affected the balds, and more importantly, whether the managed use of these animals can be a cost-effective way to help us protect and maintain these natural areas.

For WNCW and the U.S. Fish & Wildlife Service, this is Gary Peeples.