



Smokey's Conundrum: Prescribing Fire on the Blue Ridge

by Dudley Sisk, Jim Walker and Wally Warren

This past spring, mountain laurel and piedmont rhododendron have bloomed more brilliantly and prolifically than they have in many years. Lovely as they are, given their intolerance of fire, the shrubs are also often cited as evidence of the suppression of burning on the Chattahoochee National Forest for the past century. The abundance of these flowers lies at the core of a debate surrounding burning in north Georgia.

Recently, the three of us attended a conference put on by the Fire Learning Network (FLN). Sponsored by The Nature Conservancy, the network seeks to make fire a regular part of ecosystems in North America and beyond. Its stated vision is to “use fire where it is beneficial to both nature and people and keep fire out of ecosystems where it is destructive.” This particular conference focused on public lands in the southern Blue Ridge Mountains. We were the only representatives of a conservation group; everyone else was affiliated with a state or federal land management agency, including the U.S. Forest Service.

The conference was instructive in many ways. It opened with presentations by the Great Smoky Mountains National Park, the Cherokee National Forest in Tennessee, and several state agencies on how they use fire on their respective lands. The meeting also included field trips, group discussions on using fire to create more desirable conditions in different forest regimes, and some talk about how to create effective monitoring programs. One thing became especially clear: whether fire helps or harms the health of a particular place, on the Chattahoochee National Forest, neither prescribed fire nor the monitoring of its results has been as systematic as on other public lands.

The meeting included many topics surrounding the results of burning, but it failed to provide any convincing evidence that fire has had a long-term, pervasive impact on the southern Blue Ridge. Henri Grissino-Mayer, a geographer at the University of Tennessee, made the only effort to prove the past presence of fire. Along with several colleagues, Grissino-Mayer has painstakingly reconstructed the fire regime of several locations in

the Great Valley of Virginia as far back as 1700. The researchers discovered forest stands that burned every five years until 1920 or so, when fire was suppressed in the region.

Grissino-Mayer's work is fascinating and persuasive, but his research is unfinished, and several important questions remain unanswered. First, most of his samples consist of fire-scarred table mountain pines, probably the most fire-dependent trees in the southern mountains, but also occurring only rarely. Thus, his samples are skewed toward fire-prone locations. Second, Grissino-Mayer is still working on establishing tree-aging protocols from before 1700. So far, then, none of his data predates the European settlement of the Great Valley. Europeans burned and grazed widely, which had enormous effects on the forest, but those effects were likely different from what was there before. Third, Grissino-Mayer's work has centered on the Ridge and Valley province, not the Blue Ridge.

Thus, we don't know enough yet to conclude whether fire occurred frequently or rarely in the Blue Ridge. There are indications that fire was a regular phenomenon in places. In *Prehistoric Native Americans and Ecological Change*, for example, Paul and Hazel Delcourt cite evidence of widespread felling of trees and burning in Native American towns along the Little Tennessee River as early as 4,000 years ago. Native Americans undoubtedly greatly altered the environment around their living places, farms, and hunting grounds. But no evidence has yet been published of great, prehistoric alterations or burning on the ridge tops or in rich, north-aspect coves.

We fear the Forest Service is substituting a new orthodoxy – widespread burning, for an older one – no burning at all. For three quarters of a century, the Forest Service fostered an anti-fire culture in the United States. Smokey the Bear was their creation. This anti-fire bias, according to Stephen Pyne, came less from science than from the enormous number of lives and amount of cash the Forest Service consumed in fighting the Great Fires of 1910. (Pyne, a historian, tells the story in *Year of the Fires* and in *Fire in America*.) The Forest Service was trying to impose one prescription on all forests. The greatest opposition came from the South, where H. H. Chapman, Herbert Stoddard and others showed the necessity of fire for the longleaf pine forests on the coastal plain. The Forest Service returned the favor by branding Chapman and Stoddard heretics.

Thus, while in the past the Forest Service excluded fire absolutely, now it may want to burn indiscriminately. One motivation for this is money; the Chattahoochee National Forest receives extra funds for burning, and those funds loosen tight budgets. The promise of more funds can skew judgment, especially when large environmental organizations like The Nature Conservancy promote the recovery of a long, glorious, incendiary past.

We do not oppose all fire. We would like to see a measured, experimental plan for burning. In some places, fire clearly has a history. For example, on Currahee Mountain, the presence of purple-headed smooth coneflower and other prairie species implies the previous existence of savannah and woodland environments in the upper piedmont, and those in turn imply past fire. Since the Forest Service burned this area in 2005, the Georgia Natural Heritage Program has begun a coneflower-restoration project. This is a good use of fire.

Fire has likely been an important presence on other sites, including the shallow, rocky, dry soils of the Tallulah Dome and the similar ridge tops of the Armuchee Ranger District. (The past presence of longleaf pine, a fire-dependent species, on the Armuchee is more evidence of fire there.) Back on the eastern side of the forest, the dry, south-aspect slopes rising from the piedmont to the Blue Ridge are sometimes dominated by pine-hardwood forests, and are another likely place for fire. Close to Bakers Branch, above Batesville, is a large stand composed partly of pitch pines, yet another fire-dependent species. At Popcorn Glade, in Rabun County, a serpentine barren has created a large cedar opening that would benefit from fire.

Still, many parts of the forest should not be burned at all, especially those in the core of the Blue Ridge. Fire has no business in the Rich Mountains, with their fertile, deep soils and lush plant cover. No drip torch should ever be applied to any north-facing cove, either.

The largest questions are about areas that lie between these extremes. Until now, the Forest Service has burned randomly on the Chattahoochee, more as a wildfire prevention measure than for any ecological restoration. The Fire Service needs to devise a systematic plan that respects the land and starts on a small, experimental scale. It needs to burn first and most often in those areas where fires have clearly burned repeatedly in the past. It needs to avoid those areas where fires have never burned. In the remaining areas, it needs to burn systematically, on a small scale, and monitor the results. Only when those results prove beneficial should it proceed on a larger scale.

H. H. Chapman, one of the foresters who called for fire in the longleaf pines, said it best: “between proper use of fire and promiscuous burning there is all the difference between success and failure.”