



Human Fire Evidence in the Southern Appalachians

By Jim Walker : Toccoa District Leader

On Saturday, September 17, the Western North Carolina Alliance hosted a conference at the University of North Carolina – Asheville on “The Role of Fire in the Southern Appalachian Mountains: Impacts, Response and Appropriate Use.” While all of the presentations were informative and useful (they will be reviewed in the next issue of the newsletter), I was most interested in the one by Ted Gragson, associate professor of anthropology at the University of Georgia, on “Human Fire Evidence in Southern Appalachians – European Contact to Present.”

While Desoto reached the Southern Appalachians in 1540, the first reliable data on intentional burning by Indians are from the British, no earlier than 1690. Col. Chicken, Commissioner of Indian Trade, mentioned Indian forest burning in 1715. By 1800 and later, survey records provide evidence of intentional fire. The most impressive example is from Andrew Ellicott, who wrote in 1811, while surveying the boundary between North Carolina and Georgia in 1811, “The greatest inconvenience we experienced arose from the smoke occasioned by the annual custom of the Indians in burning the woods. Those fires scattered over a vast extent of country made a beautiful and brilliant appearance at night; particularly when ascending the sides of the mountains.”

Gragson pointed out, however, that these later accounts (after the early 1700s) came at a time of intense social and economic change among the Indians and may not be reflective of the fire regime prior to European contact, since the greatly increased demand for deer hides for trade may have prompted increased burning to improve hunting. Among the many other possible reasons why Indians burned, Gragson considers the most important to be facilitating the gathering of nuts, including chestnuts. He also cautioned that there are very few early primary accounts of Indian burning (about five), and all of the hundreds of scientific references are to these same few early observations. Furthermore, these observations are of a very limited area, primarily the vicinity of villages and main travel routes, where intentional burning was presumably most prevalent.

As Europeans took over the area, landscape use changed dramatically. Fire was extensively used to improve livestock browse and prepare fields. Later, during the industrial logging period, trains were a major source of unintentional fires. In 1905, in U.S. Geological Survey Professional Paper No. 37, *The Southern Appalachian Forests*, Ayres and Ashe wrote, “More than 78,000 acres of the region examined have recently been so severely burned as to kill the greater portion of the timber, but greater damage has been done by light fires creeping through the woods year after year, scorching the butts and roots of timber trees, destroying seedlings and forage plants, consuming forest litter and humus, and reducing the thatch of leaves which breaks the force of the rain. Evidence of such fires is found over approximately 4,500,000 acres, or 80 per cent of the entire area.”

Around 1920, North Carolina began to keep good records of wildfires, including occurrence, cause, size class and damage. This 80-year record shows very low fire frequency in western North Carolina. Arson and intentional burning are the primary causes, with lightning igniting only 3% of the fires since 1920. Most fires during this period have been very small, and 70-80% have burned less than 10 acres.

In summary, historical fire regimes vary greatly in different periods. It is very difficult to determine fire regimes prior to European contact. While there is no doubt that Indians practiced intentional burning for various objectives, there is little evidence regarding the size of the area affected by this burning.