Feb. 27, 2002

The following in a comment about the Southern Forest Resource Assessment, Nov. 2001, specifically the support paper on Fire,
I direct my comments to John A. Stanturf, et al

Where as I understand that the USFS research has the responsibility and duty to find and reference good documentation about the desired condition of the forest, one needs to be careful about omitting crucial information written, and making assumptions about what the authors final words mean in the big picture.

The Ozark Mountains are a mosaic of many different community types, from steep dry ridges to deep moist coves. When I reviewed the references from Missouri, I find many important details that may paint a rather different picture of the fire frequency over much of the Ozark National Forest lands. In the Proceedings of the 11th Hardwood Forest Conference March 23-26, 1997. The author used stumps and remnants of shortleaf pine trees in an Oak-shortleaf pine forest. He also noted that less than ½ of the sites looked at in the area even supported pine. By focusing on fire history, the authors went to sites that are natural chimneys for all types of fires. These fires may have been set by humans by accident, as acts of war, or occurred from natural causes. This is where the science ends and speculation begins about broad applications for the data. These sites represent a very small slice of the overall landscape which composes the Ozark forests.

The period 1701-1820 was called the repopulation period. These new residents were probably displaced Eastern tribes who had taken on the horse and other livestock and lifestyles of the Europeans by whom they were being displaced. The whole history of the tree-ring record is really too short to say it represents thousands of years, when only hundreds of years of tree ring information was analyzed. The authors also noted that these fire dependant pine sites are becoming predominantly populated by less fire tolerant oaks. More fire=less oaks. The wide range in the number of fire scars from one tree to another, even in these fire prone sites, is indicative of the type of fire mosaic that the whole landscape would tolerate. Some sites would burn more, but some would burn less (if ever at all). The practice of adding up all the fire scars to get as low a fire frequency mean as possible, is contrary to the scientific method that data must be collaborative within the same site. This seems to make a weak case that one fire came but only few trees were affected. To look at the natural fire regimes, one would have to go to the period before Desoto and there doesn't seem to be any real evidence in the literature for this early period. Looks like to me like man has altered the natural fire frequency regime; from one of rare fire, to one of increasing fire as population pressures increased.

In the Forest Research Report #1 Mo. Dept. of Conservation 1997, the authors used two small clusters of only 9 crossections of particularly badly scared pine trees to make their inferences about fire return frequencies. This site may have been a favored campsite and these fire scars are from escape campfires. The 48-year long MFI when all trees on the site were affected may really be most representative of the natural background of fire in this site so prone to fire.

As noted in Fire Frequency on an Oak-hickory Ridgetop in the Missouri Ozarks, the sites studies represented a small portion of the total mosaic of forests in the region of only about 5%, and this would include all of the sites in Missouri that Guyette has studied (3.9% shortleaf pine/pine-mixed oak, 1.8% red cedar/cedar-mixed hardwoods) with over-all landscape only 42% forest would mean that the sites are representative of (at most) 2.5% of the forest in the region. But there is no reliable fire history for the other 97% of forest types to suggest that forest managers should use fire in the whole forest. I feel that due to potential sampling bias towards trees that tend to have frequent fire scars, we have been lead to believe in unrealistic predictions of the pre-settlement natural, background fire frequency in the Ozarks. Thanks for the opportunity to comment on this report.

Sincerely,

George Imrie

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Please be careful when using site specific data with limited applicability for the region as a whole when developing broad management plans.