

Changes in Fire Regimes and the Successional Status of Table Mountain Pine (*Pinus pungens* Lamb.) in the Southern Appalachians. 01-3-3-32. Henri D. Grissino-Mayer and Michael Jenkins.

Problem: Fire suppression activities during the past century have altered the fire regime in the southern Appalachians and may be preventing the establishment of Table Mountain pine, thus causing concern the species may eventually be extirpated.

Approach: Fire history was determined using dendrochronological techniques to identify and date fire scars and to assess the frequency, seasonality, and extent of past fires. Current age structure of the Table Mountain pine was also determined using dendrochronological techniques. Cores were collected from a minimum of 75 trees at each of the five study areas.

Project Findings: Very little regeneration of Table Mountain pine has occurred since the establishment of the Great Smokey Mountain National Park. The lack of significant regeneration is most likely due to fire suppression that began around the time of establishment. The peak age structure (60-69 and 70-79 age-classes) of Table Mountain pine stands correlates to the period before and just after the official creation of the park in 1934. The Weibull Median Fire Interval and Modal Fire Interval for Table Mountain pine stands were 6.8 and 4.8 years respectively using pre-park fire scar data.

Deliverables and Technology Transfer: A specific web site containing interconnected web pages dedicated to this study is located at: <http://web.utk.edu/~grissino/jfsp013332/>. This study was also used to complete a master's thesis.

Project & Technology Transfer Implementation: The thesis does a good job of using dendrochronological techniques to determine age structure and fire history and interval within the study area.

Reference:

Email from Henri D. Grissino-Mayer.