

Tree-Ring Dates from Chicoma Peak Lookout Cabin

Thomas W. Swetnam
Jemez Mountains Tree-Ring Lab, Jemez Springs, New Mexico
&
Laboratory of Tree-Ring Research, University of Arizona
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On August 19, 2018 Barbara Zinn, Craig Allen and Tom Swetnam hiked to the ruins of a log cabin, located approximately ½ mile to the SE and below the summit of Chicoma Peak. Five sections were cut off the cabin logs using a hand saw. Cross section samples #1, #2, and #3 were cut from the ends of logs on the northeast corner. Samples #4 and #5 were taken from logs on the north and west sides of the ruin. See diagram appended to this report.

All cross sections were mounted on ¼ inch plywood, re-sectioned on a bandsaw, and then they were sanded with a belt sander up to 400 grit. Skeleton plots were made from the ring series of two samples (#1 and #3) and these plots were crossdated against a master skeleton plot derived from multiple tree-ring sites from the Jemez Mountains. Samples #2, #4 and #5 were crossdated visually, utilizing the typical Southwestern US narrow ring pattern which shows clearly in the outer decades of these specimens, i.e., 1896, 1899, 1902, 1904.

All samples appear to white fir (*Abies concolor*).

ID	Inner Date	Outer Date*	Comment
1	1766 near pith	1905vv inc	very weathered on outside
2	1832 pith	1910v inc	
3	1798+/- pith	1910v inc	budworm outbreak (?) visible 1865-70
4	1852+/- pith	1911v inc	
5	1856 pith	1910v inc	

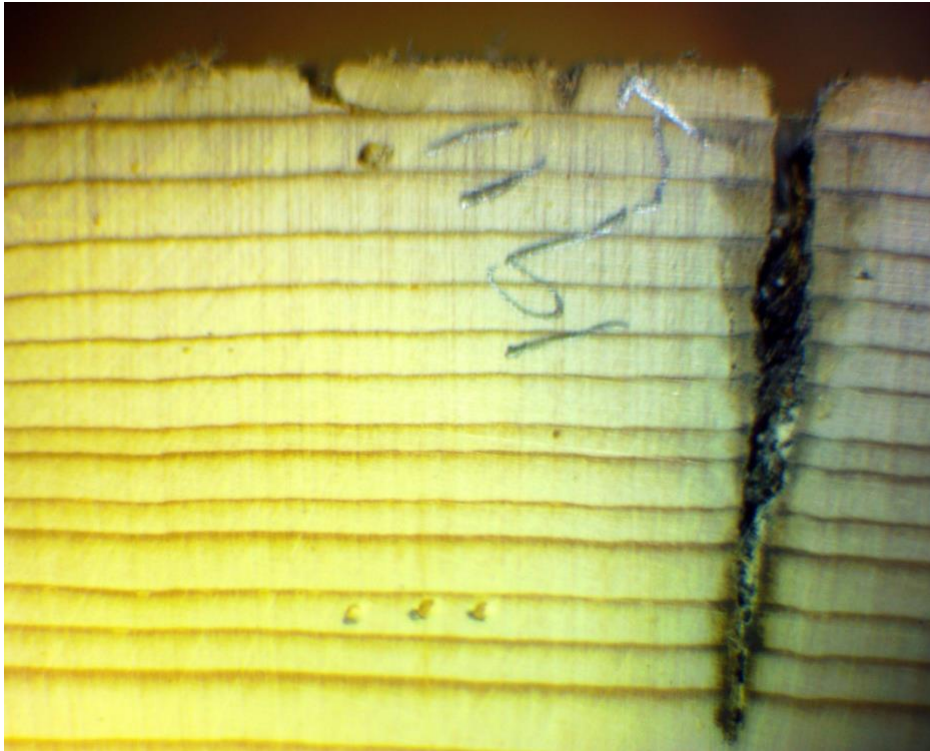
* v = date is probably within one to a few years of cutting date, but not possible to be sure because of weathering, and lack of bark; vv = date is likely more than a few years before cutting date because of heavy weathering; +/- = dates not exact because of decay or dating problems; inc = means incomplete ring, lacking latewood, indicating possible cutting during summer growing season.

It appears that the cabin was probably built in 1910 and/or in 1911. Only one sample, #4, had an incomplete 1911 ring (see Fig 1). This was the topmost log on the north side. So, possibly, some logs were cut in 1910 and the building started that year, and completed in 1911, with more logs cut in 1911. Or, all building was in 1911. Also, given that no definite bark rings were present on the samples, the building could have been a year or more later than 1911. However, it appears to me that these logs were all probably cut in 1910 and 1911.

POSTSCRIPT: After completing this report I received from Barb Zinn copies of the 1911 Newsletter of the Jemez National Forest. In the November issue of that newsletter was this paragraph, independently confirming the tree-ring dating interpretation that I came to:

“During the month of September an improvement crew in charge of Ranger Leese constructed a log cabin at the Chicoma Ranger Station and a forty-acre pasture. This station will be used by the officer stationed at the Scenic Mountain during the fire season.”

Figure 1. The last decade of ring growth on sample #4, showing the 1911 ring, and characteristic (slightly) narrower rings in 1899, 1902 and 1904.



The crossdating is good for several of the specimens, but all series are complacent, i.e., lacking much ring-width variation.

Last, one of the specimens (#3) had a severe, sustained growth reduction from 1865 to 1870, followed by a growth release. This was probably due to defoliation by western spruce budworm (Figure 2). This widespread outbreak is well documented in other mixed conifer sites in the Jemez Mountains (Swetnam and Lynch, Ecological Monographs, 1993).

Figure 2. Growth reduction and release probably due to western spruce budworm.

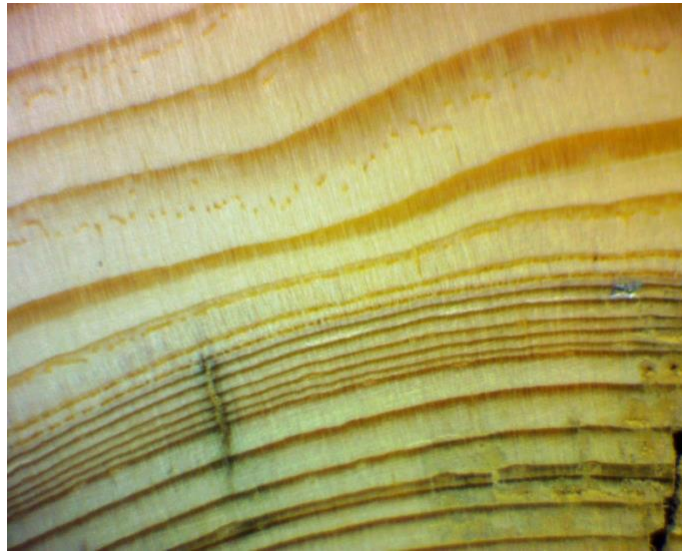


Figure 3. Craig Allen, and in the background the northeast corner of the cabin is visible where several specimens were taken. Barb Zinn sitting.



Figure 4. Misc. views of the cabin ruins:



Figure 4. continued:

