

Laboratory of Tree-Ring Research

1215 E. Lowell St.

The University of Arizona

Tucson, AZ 85721

3 June 2019

Ms. Joni Smith
Beulah Heritage Preservation League,
PO Box 12,
Beulah CO, 81023.

Dear Ms. Smith:

At long last, this letter and accompanying documents constitute our brief report of the analysis of tree-ring samples from the Dotson Cabin near Beulah.

We collected 29 samples from Rooms 1 and 2; 12 samples from the North and East walls of Room 1 and 17 samples from Room 2—samples from every wall. All of the samples are pines, which is not surprising.

After transporting the samples to Tucson, sanding them with fine-grit sandpaper, and skeleton plotting them using the Douglass method of crossdating, we generated 18 dates. The 62 percent success rate is quite good, especially for relatively new areas like Beulah. The samples that did not yield dates typically lack a sufficient number of rings for crossdating, exhibit unique growth anomalies, or lack ring-width variability.

The 18 dates include 16 cutting dates—really impressive—that indicate the last ring on the sample was the last ring grown by the tree. Sample SAC-84 (1807-1860vv) is missing exterior rings for some reason; they may have been removed during beam preparation or modifications to fit in the structure, or simply eroded off. SAC-85 (1782-1858++B) is also a noncutting date indicating the tree was dead prior to being procured for use in the cabin.

The 16 cutting dates form a very tight cluster that is quite interesting. In Room 1, SAC-66 (1796-1867+B) and SAC-72 (1798-1868+B) are both potentially missing rings near the end of the ring sequence and could date a year or two more recently than those years. Combined with SAC-63 (1795-1869B comp), which was cut after the 1869 growing season, these three samples suggest some timber harvesting in fall 1869/spring 1870. The other dated beams in Room 1 (SAC-64, SAC-65, SAC-69) were cut after the 1871 growing season, but prior to the initiation of growth in 1872.

Room 2 yielded 12 dates, 10 of which are cutting dates. The distribution is interesting in that the strong cluster of 8 cutting dates indicate tree harvesting after the end of the 1871 growing season.

A single beam (SAC-89) was cut after the end of the 1870 growing season, and another (SAC-83) was cut after the cessation of growth in 1872.

My summary is that the structure was built in 1871, probably in the late fall. It is possible the beams were cut early in 1872 prior to the initiation of growth. But, someone was also cutting a few beams in the years prior—probably in anticipation of construction since the beams are really measured to fit Room 1. The single beam cut after the 1872 growing season (SAC-83) offers one last possibility. It is the highest beam in Room 2—the very top that supports the roof. So it is possible the entire structure was built in the fall of 1872 with beams stockpiled from the previous few years. More likely, in my opinion, is that the roof was not finished until late 1872, but everything else was already in place.

If you have any questions, or required additional information, please feel free to contact me at the address above.

Sincerely,

A handwritten signature in black ink, appearing to read "Ronald H. Towner". The signature is fluid and cursive, with a long horizontal flourish extending to the right.

Ronald H. Towner, PhD
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