

Spring 5-18-2011

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Dendrochronological Dating of the Miller Tavern, The Village of Somerset, Ohio

Sampled: May 18th 2011
39°48'24"N 82°17'57"W

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<http://treering.voices.wooster.edu/about-2/>

Objective:

To provide a calendar date for the felling of timber from the historical Miller Tavern structure using dendrochronology. Tree-ring crossdating shows that the beams for the Miller Tavern were cut in the spring of 1808.

Methods and Analyses:

Cores taken from beams in the Miller Tavern were prepared and crossdated using standard dendrochronological techniques. Rings were measured to the nearest 0.001 mm (Fig. 1) and then crossdated against each other, developing a “floating” site chronology before matching ring-widths with the calendar dated northeastern Ohio regional oak series (Table 1, Figures 1 and 2).

All eight oak series were successfully calendar dated but only two of the series, (MT1B and MT4; Table 1) had what appears to be the true outer ring (cut dates of 1808). These outer rings show that the timber was felled in the spring of 1808.

The cores dated together span 202 years from AD 1606 – 1808. The data from the structure is instrumental in expanding our knowledge of the chronology of the village of Somerset, but also of the greater north central Ohio region.

Table 1: Table of the inner and outer calendar dates for the eight Miller Tavern cores that were dated. The asterisk on the outer ring year denotes the presence of the bark year.

Core	Inner Year	Outer Year	Total Year
MT1B	1675	*1808	133
MT2	1675	1806	131
MT3	1606	1807	201
MT4	1737	*1808	71
MT6	1675	1806	131
MT8	1634	1805	171
MT10	1670	1802	132
MT11	1677	1803	126

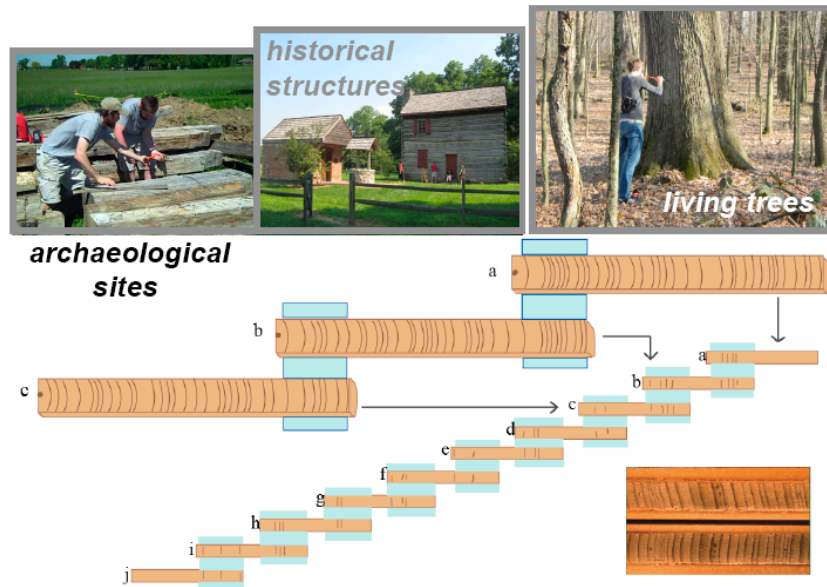


Figure 1. Diagram illustrating tree-ring crossdating. Patterns in ring widths from historic structures and wood associated with archeological sites are matched to living tree-ring chronologies and thus calendar dates can be assigned to each ring.

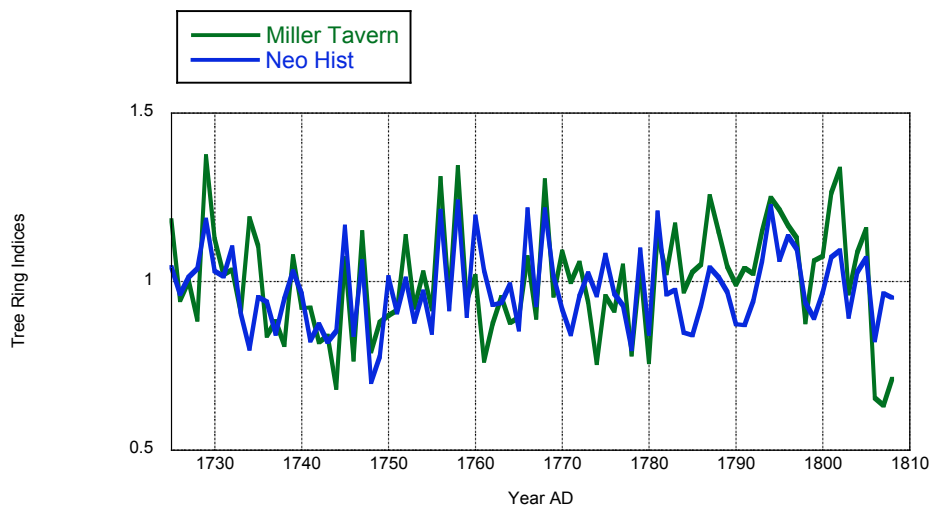


Figure 2. Graph showing the over lap in ring-width series from the Historic Structures from Northeast Ohio (blue) and the series measured from beams from Miller Tavern (green). The correlation coefficient for the 85 year overlap is 0.64.

Archive Statement:

All cores are archived at the Wooster Tree Ring Lab, housed in the Department of Geology, at The College of Wooster.

References:

Holmes, R. L. 1983. Computer-assisted quality control in tree-ring dating and measurement. *Tree Ring Bulletin*, **43** (1), 69-78.

Stokes M. A., and Smiley, T. L., 1968, An introduction to tree-ring dating: Tucson: University of Arizona Press.