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Dendrochronological Analysis of the McGlumphy Homestead

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Tree-ring dating of three structures at the McGlumphy residence 7073 Stucky Valley, Road Stone Creek, Ohio 43840

Sampled: 22 September 2014

Austin, Haley N., Bender, Sarah K., Downes, Zachery J., Franceschi, Julia O., Frederick, S., Herold, Thomas R., Mann, Meredith E., McGuire, Eamon W., Misinay, Daniel, Nelson, Wilson P., Perman Isabel D., Schreck, Kelsey L., Turnbull, Emily F., Wiesenberg, Nicholas and Wiles, Greg

Wooster Tree Ring Lab
Department of Geology
The College of Wooster
Wooster, OH 44691
Tel: 330-263-2298, gwiles@wooster.edu



Objective:

To provide calendar dates on three historical structure (the *Main House* – the current McGlumphy residence, the *Rental Cabin* – current bed and breakfast and the *Work Cabin* – log building being restored) in Stoney Creek, Ohio. All cores and data are archived at the Wooster Tree Ring Lab, housed in the Department of Geology, The College of Wooster.

Methods:

Core samples were taken from beams within the structures using hand augers and electric drills. The cores were then glued to wooden sticks and sanded so that the rings could be viewed clearly. Using a microscope, the rings of the cores were counted and measured to the nearest 0.001 mm using standard dendrochronological techniques. Rings were then cross-dated against each other to create a “floating” chronology. Using the computer program COFECHA, the site’s ring-width data was then compared to the calendar-dated Northeast Ohio (NEO) regional ring series to obtain calendar years for the felling of the timber (Fig. 1).

Results and Analysis:

Cross dating of the *Main House* samples with the NEO master series determined that the trees were cut in 1871 to build the main portion of the house (Table 1, part 1). This indicates that the main house was likely built in 1871. The samples from the *Rental Cabin* indicate that the trees were cut in 1826 which points to a likely build date of about 1826 (Table 1). The *Work Cabin* beams yielded outer ring dates of 1835 and 1836 and was likely built about that time. Other cores were collected from each building and could be inserted into the chronology, however these samples did not have outer rings; these will be dated later as time allows.

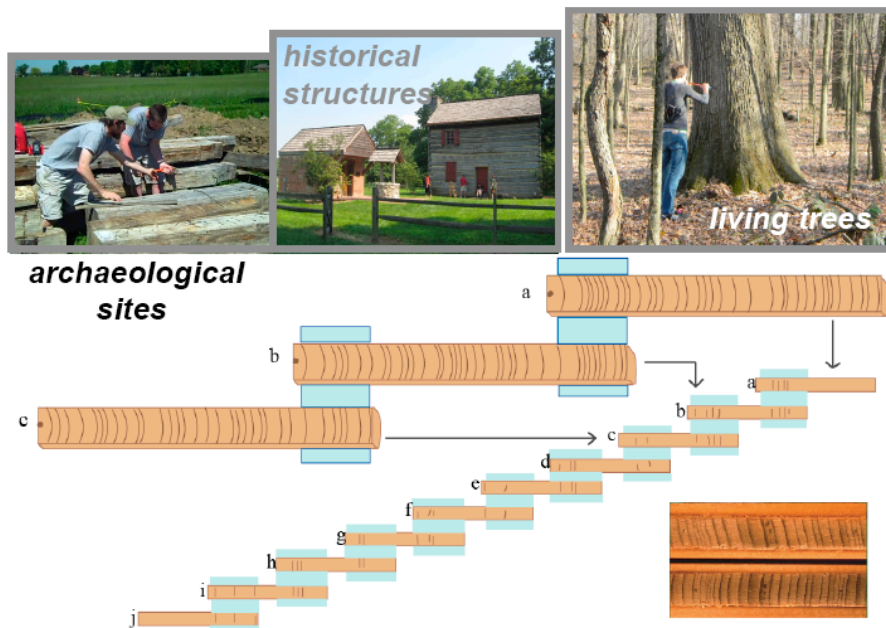


Figure 1. Diagram illustrating tree ring cross dating. Patterns in ring widths from archaeological and historic structures are compared to living tree ring chronologies in order to assign calendar dates to each ring.

Table 1. Tree ring data from the McGlumphy structures.

Structure/ Sample	Inner Year	Outer Year	Total Years
<i>Main House</i>			
mcgl1n	1807	1871*	65
mcgl4n	1825	1871*	47
mcgl6n	1710	1869	160
mcgl8n	1709	1871*	163
mcgl8an	1717	1865	149
mcgl9n	1718	1859	58
<i>Rental Cabin</i>			
mcglrc1	1660	1826*	168
mcglrc2	1639	1826*	188
mcglrc3	1649	1824	176
mcglrc4	1659	1825*	167
<i>Work Cabin</i>			
mcglwc1	1751	1826	76
mcglwc2	1714	1831	118
mcglwc3	1735	1834	100
mcglwc6	1706	1836*	131
mcglwc8	1714	1835*	122