

5-17-2011

Dendrochronological Dating of the Old Rectory, Worthington, Ohio

Follow this and additional works at: <http://openworks.wooster.edu/historicstructures>

 Part of the [Geology Commons](#)

Recommended Citation

"Dendrochronological Dating of the Old Rectory, Worthington, Ohio" (2011). *Historic Structures*. 14.
<http://openworks.wooster.edu/historicstructures/14>

This Book is brought to you for free and open access by the Geology Data Archive at Open Works, a service of The College of Wooster Libraries. It has been accepted for inclusion in Historic Structures by an authorized administrator of Open Works. For more information, please contact openworks@wooster.edu.

5-17-2011

Dendrochronological Dating of the Old Rectory, Worthington, Ohio

Follow this and additional works at: <http://openworks.wooster.edu/historicstructures>

 Part of the [Geology Commons](#)

Recommended Citation

"Dendrochronological Dating of the Old Rectory, Worthington, Ohio" (2011). *Historic Structures*. 14.
<http://openworks.wooster.edu/historicstructures/14>

This Book is brought to you for free and open access by the Geology Data Archive at Open Works, a service of The College of Wooster Libraries. It has been accepted for inclusion in Historic Structures by an authorized administrator of Open Works. For more information, please contact openworks@wooster.edu.

Dendrochronological Dating of the Old Rectory, Worthington, Ohio

Sampled: May 17th 2011
40°05'13.32"N 83°01'12.10"W

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



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

Objective:

To provide a calendar date for the felling of timber from the historical Old Rectory structure using dendrochronology and to develop a ring-width tree-ring chronology from the timber used in the construction of the structure. Tree-ring crossdating shows that the beams for the Old Rectory were cut in the spring of 1846.

Methods and Analyses:

Cores taken from beams in the Old Rectory 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 southeastern Ohio beech series and our Northeast Ohio mater ring-width chronologies (Table 1, Fig. 1).

All five beech series were successfully calendar dated but only two of the series, (OR7 and OR12; Table 1) had what appears to be the true outer ring (cut dates of 1846). The cores dated together span 115 years from AD 1732 – 1846. These outer rings were not fully formed, which shows that the timbers were felled in the spring of 1846.

Table 1: Table of the inner and outer calendar dates for the five Old Rectory 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
OR2	1736	1801	66
OR4	1765	1828	64
OR7	1745	1846*	102
OR11	1765	1841	77
OR12	1732	1846*	115

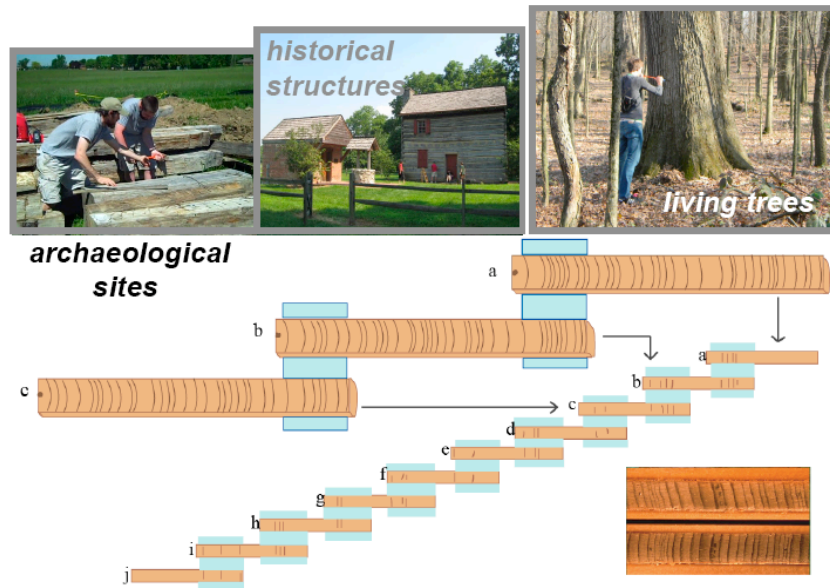


Figure 1. Diagram illustrating tree-ring crossdating. Patterns in ring widths from historic structures and wood associated with archeological sites are matched to living tree-ring chronologies and thus calendar dates can be assigned to each ring.

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.