

Winter 12-12-2005

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Tree Ring Dating of Beams and Trusses in the Geiser House Forrer Road, Orrville, Ohio

Report submitted to Shawn Godwin
12 December, 2005

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General: Sampling was done by coring and cutting beams. Cores were processed and crossdated for a ring-width tree-ring record at the Wooster Tree Ring Lab using standard dendrochronological techniques (Stokes and Smiley, 1968). These techniques include preparing the cores surfaces, counting, measuring and crossdating ring-widths. Ring-widths were measured to the nearest 0.001 mm and crossdating was performed visually and using the computer routine COFECHA (Holmes, 1983).

Samples (Table 1) were internally crossdated with one another to construct a floating ring-width series. This floating chronology was then dated against calendar-dated, living, ring-width chronologies from the region including Johnson Woods, Sigrist Woods, and Brown's Lake Bog (ITRDB, 2005; Wooster Tree Ring Lab, unpublished data, 2005). The floating ring-width chronology spans 278 years and when adjusted for calendar dates dates from 1561-1839. The final column of Table denotes the presence of the outer ring on the sample with an asterisk.

All cores and data are archived at the Wooster Tree Ring lab, which is housed in Scovel Hall in the Department of Geology at The College of Wooster.

Table 1. List of tree-ring series from the Geiser House, Forrer Rd. Orrville.

Number	Series	Yr. Range	Age	Outer Ring
1	ORR1	1691-1835	145	*
2	ORR2	1667-1745	79	
3	ORR3	1697-1837	141	
4	ORR4	1628-1783	156	
5	ORR5	1668-1814	147	
6	ORR6	1744-1810	67	
7	FRO-2	1713-1813	101	

8	FRO-3	1686-179	110	
9	FRO-4	1679-1834	156	*
10	FRO-5	1689-1835	147	
11	FRO-6	1565-1765	201	
12	FRO-7	1561-1721	161	
13	FRO-8	1610-1777	168	
14	FRO-10	1669-1835	167	*
15	FRO-11	1679-1839	161	*
16	FRO-13	1613-1779	167	
17	FRO-14	1572-1753	182	
18	FRO-15	1728-1830	103	
19	FRO-16	1720-1821	102	
20	FRO-18	1634-1817	184	
21	FRO-19	1550-1752	203	
22	FRO-20	1657-1817	161	

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*. Chicago: University of Chicago Press. 73 pp.

International Tree-Ring Data Base (ITRDB), 2005, www.ncdc.noaa.gov/paleo/paleo.html.

Appendix I. Historical dating using tree-rings. Figure shows the principle of crossdating

