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Dendrochronological Analysis of the Strouse Barn, Holmes County, Ohio

July 2, 2007

Report submitted to Dr. Nigel Brush.

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General Analysis:

Twelve tree cores were sampled from the Strouse Log Barn in Holmes County, Ohio. The twelve cores were processed and crossdated at the Wooster Tree Ring Lab using standard dendrochronological techniques (Stokes and Smiley, 1968). These include preparing the core surfaces by sanding, counting, and measuring ring-widths to the nearest 0.001 mm. Crossdating was performed visually and using the computer routine COFECHA (Holmes, 1983).

The twelve samples consisting of cores from oak trees (*Quercus*) (Table 1) were internally crossdated with one another to construct a floating 263 ring-width series. The floating chronology from the Strouse Log Barn was then absolutely 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from the region including Johnson Woods, Sigrist Woods, and Brown's Lake Bog (ITRDB, 2005; Wooster Tree Ring Lab, unpublished data, 2005).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 from the Strouse Log Barn in Holmes County spans 319 years and when adjusted to calendar dates ranges from AD 1516- 1835.

Table 1 summarizes the calendar dates of each sample and lists the presence of an outer ring in the samples. Outer rings provide a calendar date for when the tree was cored or cut. Some samples do not have the last year of growth present.

This ring-width chronology will contribute to tree-ring data in Northeast Ohio as well as be included in climate studies, especially those concerned with drought variability in the region and our efforts to date historical structures. All sections 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. We would be happy to discuss the results with you; specific information can be found on the TRL website.

Table 1. Calendar-dated tree-rings series from the Strouse Log Barn.

Sample Number	First Year of Growth	Last Year of Growth	Total Years	Comments and presence of outer ring (*)
ST01A0	1774	1794	21	Right of Front Door
ST02A0				Left of Front Door
ST03A0	1747	1834	88	Left of Front Window
ST04A0	1516	1562	47	Left of Front Window above Sample #3
ST05A0	1571	1627	57	Bottom Right Corner on the back side of the house
ST06A0				Top left of back window
ST07A0				Bottom left of back window
ST08A0	1787	1832	46	Above window on the back side of the house
ST09A0	1693	1835	143	Right side of the house
ST10A0				Inside the house
ST11A0	1664	1771	108	Beam from the attic
ST12A0				Inside next to the fireplace