Deep in the historic Great Valley of Chester County, Pennsylvania, in far western Tredyffrin Township, is a small log structure simply referred to by many as the “Church Road Cabin.” It sits above a bridge built in 1918, over which the serpentine course of Church Road crosses Valley Creek. The view of the surrounding area from this promontory can momentarily take a visitor back in time.

Yet, on any given work day, a sometimes endless stream of commuters transit through this undulating portion of the valley, talking on their cellualrs, and taking little note of the surrounding wooded topography and the 18th and 19th century ruins still visible in the immediate area. To most casual observers, there is an invisibility of the past.

To many of our community’s “old-timers”, however, the Church Road Cabin and its neighboring terrain has a trove of lore attached to it, and one blithely challenges that lore at their peril. But this author will venture forward and consider both the legends ... and the substantiated facts as they are revealed; and then, using state-of-the-art science, provide a best estimate of what really happened in this portion of the valley.

The Earliest Settlement of the Great Valley
By 1687, just six years after the English King Charles II awarded William Penn the largest grant ever given to a single individual in America, a survey map of Penn’s Surveyor General portrays a westward expansion from the Delaware River to include what is today all or part of thirteen Pennsylvania townships, including Tredyffrin and East Whiteland. These western townships, for reasons still obscure, remained sparsely settled until about 1700 when then they were finally surveyed for sale.

An Anglican missionary laid the foundation in 1700 for a Church of England parish in the Welsh Tract’s western end, with a portion of that parish within a loosely-formed community in the Great Valley called Montgomery. A communal burying ground was cleared around 1703 at the wooded crest of the eastern valley’s highest hill. Several years later, Montgomery’s Anglican congregants constructed a log chapel adjacent to the ground already used for interments. It is probable that the chapel structure was designed to be defensible in an emergency, and its location on this highest hill would have been strongly influenced by the awareness of the inhabitants that the extraordinarily friendly relationship with the Indian population could turn deadly through actions outside of their own control.

Church Road and the Fulling Mill
By the mid-1720s, the wild edge of the Great Valley was beginning to recede, and a slim matrix of established roads was beginning to replace the deer paths and Indian trails. One of these was the Church Road, laid out about 1724 to connect Pickering Creek in Whiteland Township with the Conestoga Road in present-day Paoli. Beginning from the old Morehall Road (near present-day Route 29), it cut diagonally across the northeast corner of Whiteland Township that would later become the epicenter of the Cedar Hollow limestone quarry, and toward the log chapel that would become known in 1744 as St. Peter’s Church in the Great Valley. Continuing down past the chapel, the original Church Road traveled south along the current St. Peter’s egress road and wended...
its way toward a ford across Valley Creek before climbing east and then south toward and across the Swedes Ford Road (1724), beginning its ascent of the South Hill and Conestoga Road.

Just upstream from where the Church Road forded Valley Creek, a structure was built which was initially used to operate as a Fulling Mill. [Fullers were the cloth finishers and dry cleaners of the 18th century. Using sets of water-powered hammers, new cloth would be beaten to allow the weave to tighten, after which the fuller trimmed the cloth’s nap before the dyeing process]. While the construction date of this structure is undocumented, the first reference to this building shows up in a 1739 document attributing ownership to Samuel Lilly.

**St. Peter's Church in the Great Valley**

The Anglican community who had been meeting in the log chapel was, by 1744, officially calling itself The Church of Saint Peter in the Great Valley. The congregation had just completed the initial construction phase of a fine stone church building, built in close proximity to the old chapel. Worship services soon shifted to the new stone structure, but for another eight years the old log chapel stood.

This author has recently discovered an obscure, unpublished manuscript, entitled *The Reverend William*
Currie, 1736-1776 [the legendary Anglican missionary to St. Peter's Church in the Great Valley and St. David’s Church – Radnor], written in the 1880s by the local historian Julius Sachse, which provides new information on the “Indian troubles”; the diversity of the valley population in pre-Revolution times; and the evolving disposition of the then-redundant St. Peter’s log chapel. Here are some examples:

“During this time [1747-48] many rumors were rife as to the rising of the Indians or intended incursions of the French with their Indian allies on our defenceless [sic] western border hardly fifty miles west of the Parish. Meetings were held by the Congregation [of St. Peter’s Church] as strenuously urging an armed resistance, as such was opposed by the Quaker Element in the vicinity. How Mr. Currie’s sympathies were can still be seen from” [his sermon entitled]

_A Treatise on the Lawfullness of Defensive War, in two parts._
_by William Currie_
Printed and sold by Benjamin Franklin and D. Hall at New Printing Office, Market Street, Philadelphia 1748

“. . . During the whole period of the French and Indian troubles, A.D. 1752-1763, there was much alarm throughout the parish. Three years later, with the news of Braddock’s defeat, came rumours of an advance of the French and Indians, it was said to capture Philadelphia. It was not long before the Indians extended their incursions so far as the neighborhood of Reading, scarcely 30 miles distant, where they killed and scalped many of the inhabitants. And the wild fear which only the torch and the tomahawk could inspire everywhere prevailed. The parishioners however were not idle. Battalions for defense were formed. Judge William Moore, late Vestryman of the Church, was appointed Colonel of one of the Chester County Regiments ... The second Company was formed of Germans, most of whom were attending the German services at St. Peter’s Church ... This Home Guard system continued, it is said, until Pontiac’s Peace and withdrawal in August 1764.”

Also included in the manuscript is reference to an oral history which Sachse recorded that reached back to the early days of the valley, and which has pertinence to our Church Road Cabin story today:

“Years ago, this writer [Sachse] was told by an old gentleman that in former times German services had been held in the St. Peter’s Welsh Church in the Valley; that the attendance of Germans as well as English residents was so great that galleries had to be erected on two sides of the Church to accommodate the worshipers; and that my informant’s ancestor was a German “redemption [indentured] servant” who had attended and worshipped at these services. Also, that the German Lutherans who attended these services at St. Peter’s ... wanted to purchase the original log structure for their exclusive use, but the Vestry, after due deliberation, refused the request and decreed its removal, that there might be less danger to the congregation in case of any sudden Indian attack while at worship. This was in 1752.”

Part of this conversation can be easily verified. In the original Records of St. Peter’s Church, a collection of the actual Vestry minutes recording the old church’s business meetings from 1744, this author can personally attest an entry, dated May 18, 1752, stating simply “At a Vestry held at said Church . . . the Said Vestery aprovd of ye Disposual of ye old Logg Church.”

There is, however, no reference to German redemptioners, their offer to buy the chapel, or indeed what became of the timbers from the old structure’s disposal.

**The Church Road Cabin and Environs**

In Eberlein & Hubbard’s treatise on the history of St. Peter’s Church, the historians relate a long-standing local legend that provides a possible connection between the Anglican congregation and the nearby Church Road Cabin:

“Tradition says that a member of the Vestry bought the materials of the demolished building and therewith built his son a house, and therein the son raised a large family of children.”
As we have seen, the Vestry minutes say nothing whatsoever to support this tradition, giving no clue to the purchaser's identity, nor the location of a 'new' construction. Yet this author has spoken to many “old-timers” at St. Peter’s Church, former residents of Cedar Hollow, and present occupants of the Great Valley who will state as truth the legend’s assertion. 

So what verifiable ownership evidence do we have about the property on which the current Church Road Cabin stands – and its adjacent acreage - located a short one-half mile from the crest of Saint Peter’s Hill? According to unpublished deed research scrupulously compiled by Mr. Mike Bertram of the Tredyffrin Easttown Historical Society, we have the following edited record of the property:

Samuel Lilly [the attributed owner in 1739] sold the fulling mill property to James Rowland sometime shortly after, but Rowland died in 1742 or 1743. The property, however, stayed in the Rowland family, and by 1753, one of James Rowland’s nephews, John Rowland, Jr., is noted in the tax list as a miller. Interestingly, beginning in 1752 and continuing until 1776 when the church closed its doors because of the War, John Rowland Jr. served as a St. Peter’s Vestry member. In 1759, Rowland Jr. purchased the Great Valley Mill on the west side of North Valley Road.

By 1767 the Tredyffrin tax records show James Davis owning 150 acres including the fulling mill. During the succeeding 18 years the property was acquired and sold at least three times, and by 1785 the property, now owned by John Showalter, Jr., and reduced in size to 28 acres to include a corn or grist mill, water, and messuage [a dwelling house and other outbuildings, and the adjacent land used by the household], was sold to Jacob Gerber (aka Carver). By January 15, 1793, John Francis acquired the mill on Church Road along with 28 surrounding acres. Mr. Francis’ mill appears on a 1794 road plan, and the following year Mr. Francis was taxed on 20 acres with buildings, grist mill, distillery, and house; the tenant of which was an Ephraim Biffington. In the 1798 “Glass Tax” [the U.S. Direct Tax for the 4th District of Chester County], John Francis continued to own 27 acres with the following buildings: stone grist mill, 25’ x 20’; stone stable, 20’ x 15’; and a log house, 18’ x 15’, occupied by a William Jones. The house on the property was a log cabin of 2 stories, 18’ x 15’, and having 2 windows of 12 panes each.

Mr. Bertram’s detailed research shows a continued ownership evolution of the property during the ensuing years. By 1847 the official Chester County map shows it as Chrisman’s saw mill. Witmer’s Atlas of 1873 shows the property as George Fetter’s Grist and
Sawmill, as does Breou’s Atlas of 1883. The property at this time still comprised both the mill and the cabin across the road. The 1933 Chester County Atlas shows this property as part of a consolidation with other land to the south, comprising 138 acres, with E. Burke Wilford [the creator of the Main Line Airport] as owner. The 1950 Main Line Atlas shows the cabin property of 8.537 acres, now separate from the mill property on the west side of Church Road, as owned by George De Addio. Indeed, a great many residents of far-western Tredyffrin Township still today refer to the log structure as “the De Addio cabin.”

The structure and its immediate acreage were acquired in 2008 by an individual who intends to improve the property while refurbishing the log structure in an historically-correct manner. A local preservation contractor was hired for the purpose of substantially renovating the old cabin.

The Application of Science to Legend

In the summer of 2008, this author observed a great deal of construction activity on this property. Introducing myself to the new owner, I asked for, and received permission to conduct historic research on the old log cabin in an attempt to verify whether any of the traditions previously stated could be proven using acceptable scientific methods.

With that critical permission received, I sought the advice and participation – both freely given – of Mr. Earle Marshall, the veteran supervisor overseeing the cabin’s renovation, and an expert in historic log construction techniques. Because of extensive insect damage, many of the exterior oak logs, deemed to have been part of the original construction of the building, were in desperate need of replacement. Once these logs were removed and replaced, I was allowed to cut wide, full-diameter slices across reasonable intact portions of each log. Many of these
samples showed a graphic linear progression of growth rings from the log’s core to the outer remnant of its bark. Then, to convert the roughly-cut segments into precise slices, I received the generous pro bono assistance of Mr. Dave Thal, owner of The Wood Shop Malvern [http://thewoodshopmalvern.com], who carefully cut several slices from each of the sample logs with one of his high-speed band saws.

The next step was to secure someone to help us with this project who was both expert in structure age analysis, and was affordable. After considerable research, and many dead ends, I found such a person in Gregory D. Huber. Mr. Huber is a specialist in the construction of old houses and barns within Pennsylvania, New Jersey, and New York, and is the owner of Past Perspectives [www.past-perspectives.com] of Macungie, Pennsylvania. I commissioned Mr. Huber, on behalf of the Historical Society, to provide technical expertise in dating our log samples through dendrochronology, the science of tree ring dating. I invited Mr. Huber and Mr. Bertram to join me in spending a morning touring the Church Road Cabin with the owner to ascertain whether, in Mr. Huber’s professional opinion, further investigative steps were likely to produce valid dating results.

The tour with Mr. Huber was very revealing. What most impressed him about this structure was the inverted V-corner notching of the original logs, a treatment not often found in this area. These original logs extend beyond their points of attachments, in a condition called crowning. Most commonly, logs in other area log buildings are flush at the joined points. By
contrast, the notches in the Church Road Cabin are very steeply pitched – often referred to as tear-drop notches - that reflects the appearance of the notch. Such notches are rare on log buildings built after about 1790. Mr. Huber stated that the notches on the Church Road house are some of the very steepest ever seen by Past Perspectives ... going back almost 35 years. This trait was a tradition apparently practiced by first and second generation builders in southeast Pennsylvania. As the years went by, into the late eighteenth and early nineteenth century, the sides of the V became less and less steep - the effect of traditions of later generation builders.

Another impression of Mr. Huber was the apparent original exterior door opening on the south end wall - just five feet four inches high, one of the very shortest main door openings ever encountered by Past Perspectives in any vernacular house in the northeast. This, as well as other contributing factors such as the short ceiling height of the first floor, and the widely chamfered ceiling joists, reflect a reasonably early date of construction.

Mr. Huber selected what he believed to be the best three of the log slices, based on the high clarity of their rings, and predicted a high potential for successful dendro-dating. On behalf of the Society, I approved that next investigative phase.

Results of the Dendrochronology Testing

The three oak samples (*Quercus spp.*) - slices of original exterior logs taken from the Church Road Cabin - were conveyed to Mr. Huber for his final preparation. He in turn transported the samples to his colleague at Columbia University’s Tree-Ring Laboratory at the Lamont-Doherty Earth Observatory, Palisades, New York. Less than two weeks later, I received a call from Mr. Huber informing me that the felling dates of the trees, as represented by the three wood samples, had been validated to a high level of statistical accuracy.

The following are the determinations made by Columbia University’s Tree-Ring Laboratory, as presented to the Tredyffrin Easttown Historical Society on March 11, 2009 by Past Perspectives:

Cross-section “3” was from a red oak log with a 10” diameter, originally located on the structure’s north side at the 6’ level. The sample has 93 rings, with four overlapping 37 year segments and a clear waney edge. A waney edge is the last deposited annual growth ring that appeared next to the bark when the tree was living, and at the point when the tree was felled. Three of the four segments correlated with the Philadelphia Master, and the East Pennsylvania Master, to give the tree’s beginning year of 1691. The correlation in both cases was .40. The critical correlation in this program, at which one can have a 99% confidence level in the results, is .3281, so these results are significant. The date for the last ring, the year the tree was felled, was 1784.

Cross-sections “4”, originally located on the structure’s east side at the 5’ level; and Cross-section “5”, originally located on the structure’s north side at the 7’ level, each
contained 71 rings, each with 3 overlapping 37 year segments. A clear waney edge in either sample could not be identified. Both samples #4 and #5 correlated with core #3 described above to give a beginning year of 1713. The correlations were .42 and .55, again statistically significant. The date for the last ring, the year the tree was felled, was 1784 in both cases.

The so-called co-efficient correlation - the confidence level obtained from computer analysis of data generated by the counting and registering of ring widths - was fairly high on each of the 3 slices, with particular credibility from cross-section “3”. Thus, the laboratory determined that the trees which produced these logs were felled in 1784. Assuming the log house was built the year following the timber’s felling, allowing the logs time to season, this cabin was originally constructed soon after the end of the Revolutionary War in 1785.

Every researcher hopes to find a “smoking gun” – that piece of evidence that confirms or validates his or her proposition or theory. If the St. Peter’s legend had been scientifically proven, with the beginning years of approximately 1640 from one or more of the trees that became the log samples, and “cut years” in the early part of the 18th century, a local legend of gigantic proportions would have been established.

That did not happen.

Yet, these test results still provided the scientific validation to local historians that we have in our midst a truly historic structure. The Church Road Cabin project has proved that for 225 years - before the U.S. Constitution was written, or George Washington was elected president of these United States - a small log cabin has stood quietly at the western edge of Tredyffrin Township, a sentinel to the passing of over two centuries.

Epilog

In the Historical Society’s first-ever use of cutting-edge scientific technology to prove (or disprove) a point of local history, we set out to challenge a long-standing tradition that logs from the old St. Peter’s chapel, built between 1705 –11, were later used to construct the Church Road Cabin after the chapel was disassembled in 1752. Original exterior logs from several sides of the structure were chosen to minimize the slight chance that we would test a replacement log. The evidence cited above, however, indicates that these three oak trees had another 32 years of growth ahead of them in 1752 before the woodsmen’s axe took them down in 1784.

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ENDNOTES

3. Bertram, pg. 93.
5. Sachse, p. 13
An Explanation of Dendrochronology

Tree-ring dating and cross-dating are pattern matchings of the differences in wide and narrow annual rings, wood density, or other ring characteristics resulting from variations in regional climate. Cores with more than 50 growth rings can be more accurately dated than shorter cores— and cores that end in sapwood and bark are best of all.

The cross-section slices need to be sanded until the annual growth rings can be clearly seen and measured on a staging computer. The resulting series of ring widths are then cross-dated with a series of ring widths from cores taken from trees or beams of previously established age from houses in Pennsylvania and New Jersey.

This data is then compiled using the computer program called COFECHA, which standardizes the raw ring-width measurements into indices to preserve the year-to-year variations that are primarily due to climate. Each segment of 50 or 37 years is compared to the East Pennsylvania, and the Philadelphia, Master series, or core, at all possible positions. The program calculates the correlation at each position. Guided by the computer-aided scanning of all possibilities, one can focus on likely cross-dating positions. By further comparisons with other correctly dated master series, the cross-dating can be verified.

There is little general literature discussing the construction techniques used in early log structures. American log houses are discussed in Terry Jordan’s book American Log Buildings, published in 1985; and The Log Cabin in America, written by C. A. Weslager and published in 1969. While both of these excellent books are out-of-print, used copies can generally be found from Alibris [www.alibris.com] or Amazon [www.amazon.com].

Gregory D. Huber

Cross-dating of tree ring samples.