

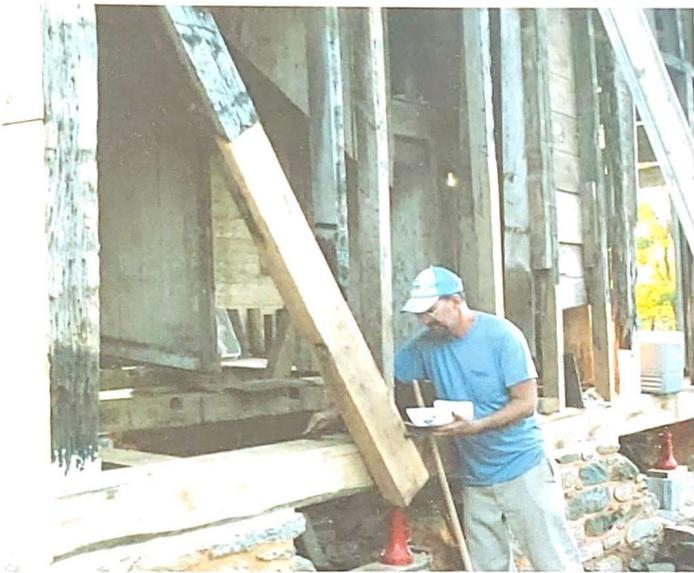
## SUMMER 2005 HOLLOW STABILIZATION FINAL REPORT #5 - WEEKS 14-20

By Cheryl H. Shepherd, Architectural Historian/Resident Project Manager for the APVA

REPAIRING THE HOLLOW STEP BY STEP, *until the season's closure in November* –

Week 14 - 16 September 12-30, 2005 – Putting it Together - the ultimate push to ready the house for the long-planned October 1<sup>st</sup> visitation celebrating the 250<sup>th</sup> birthday of Chief Justice John Marshall:

Since setting the north oak sill, APVA carpenter Mike Adams advanced the reinforcement of several punky framing members on this back wall with Abatron and/or West System wood consolidates. He placed the heavy down braces into the corner posts and cut the mortises in the sill for the tenons of the braces before treenailing (wood pegs) the timbers together. As he had done on all new timber, Mike stamped 2005 on his splice.



Both photographs above show the wood epoxy treatment on the corner posts and studs on the north back wall. Mike, at left, has the repaired west down brace in training position to acclimate the somewhat resistant member to its proper position before cutting the joints and finally pegging the timber into the sill. Mike's new false tenon and consolidation of the northwest corner post along with the rotted-off ends of the studs on the west side are shown in the picture on the above right. Below right, the sun highlights the consolidation of the rotted joint area of the down brace and the southwest sill. Closely inspecting the bottom of the down brace at center-right, one might notice the four arched gouge marks added by the original carpenter to designate the matching location of these joints and timbers. Generally, early timber framers used Roman numerals to identify matching mortise and tenon joints.



Realizing the planned Summer 2006 restoration of the west-end stone chimney would hide recently exposed evidence, Cheryl Shepherd further investigated, documented and analyzed the round treenail-size mortises on the inside of the heavily-weathered chimney studs. The full removal of the

chimney in 2004 revealed for the first time that the mortises continued nearly to the second-floor plate. Before the exposure, the curious pattern could only partly be seen beside the enclosed fireplace inside the west hall. Measuring from the grade upward, the eleven mortises do indeed closely line up on each side. Mortises M2, M4, M10 and M11 on the left-north side retain broken-off treenails as do Mortises M1 through M5 on the right-south side of the chimney opening. The treenail remnants are significant evidence that demonstrate the execution of a wooden chimney on this west gable prior to construction of the stone chimney. Although wooden chimneys were outlawed before 1763 by the House of Burgesses, member Thomas Marshall apparently needed to quickly raise a chimney on his manor house at The Hollow and constructed one for the first season. Probably before the winter of 1765-66, he had quarried adequate stone to build the stone chimney after pulling down the temporary wooden component. Typical of colonial masonry chimney construction, the feature had a free-standing stack above the shoulders. Built with very rough rubble, the stack began to fail rather early in its history causing it to lean nearly thirty inches into the house by 2004 when it was dismantled to halt the weighty pressure on the house.



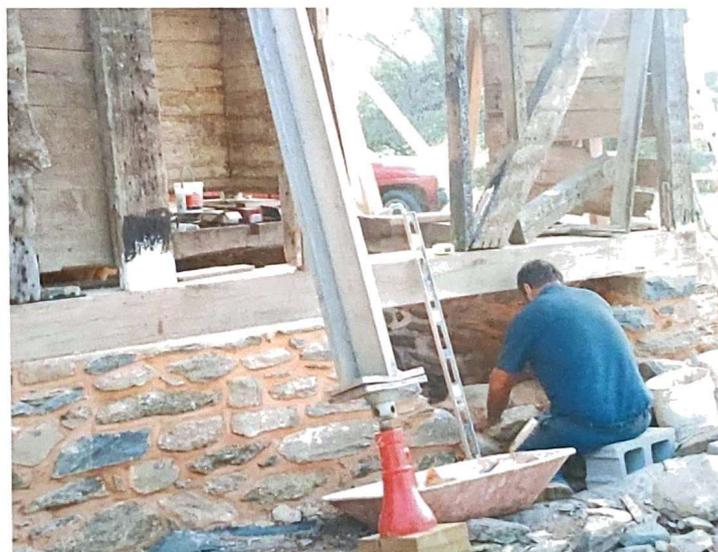
The left-north chimney stud is pictured on the left. At center, the bottom of the right-south stud clearly exhibits the broken treenail remnants, while the far right image shows the full height of the pierced and weathered upright.

Approved by the owners after learning that all sides of the stone foundation needed immediate attention, historic stonemason Edward Ashby and his crew continued their masonry work. While Francisco reconstructed the inner east foundation containing the cellar niche at the north end, Mike completed installation of the repaired northeast down brace. In the left picture on the next page, he uses a chisel

and wooden mallet to refine the receiving mortise in the corner post and uses a modern electric drill to make the hole for the treenail to fasten the tenon of the down brace into the mortise in the sill.



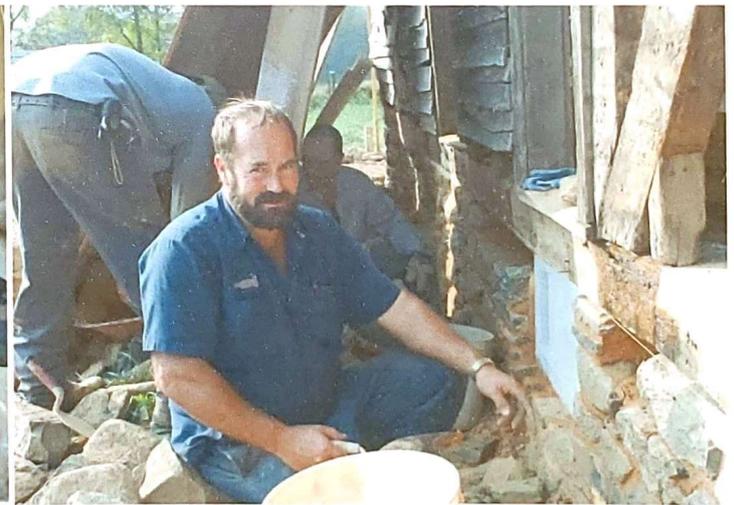
Finally, Mike hammered his hand-made treenail through the sill and east down-brace tenon. In the meantime, Edward and crew brought the north foundation wall up to the sill and prepared jambs for the cellar window that the team has determined necessary for ventilation of the lower space. Made in the APVA shop by Robert Stinger, Mike and Edward also inserted a second cellar window diagonally across from the back opening on the front corner. As earlier reported, the evidence of a cellar window on the southeast front corner clearly remains in the wrought-nailed lathing strip under the sill which served to shim or tighten the component. The circa 1900 major repair of the north stone foundation obliterated any potential evidence of a cellar window on the northwest corner of the back wall, but there were signs of a suspected cellar entrance at the site of the new window. (See Report #5.) The Hollow windows are whitewashed as Thomas Marshall would have done. After additional coating in 2006, wire mesh screens will be stapled on the inside of the windows to deter rodents and other wildlife invasion.





Above left, Mike and Edward place the northwest corner window into position, while Mike is shown above right anchoring the southeast window under the original lathing strip.

Lots still to do on a waning calendar for the October 1<sup>st</sup> visitation marking the 250<sup>th</sup> birthday of John Marshall and too little vertical space to insert new tenons in situ, Mike devised a faster stacked 2 x 4 base solution to bring the dangling rotted-off ends of the uprights down to the east sill at the southeast end (shown in the photograph at lower left). The approach is an acceptable preservation method that retains more of the original stud while distinguishing the period-one workmanship from this stabilization campaign. Also this week, Mike fully reapplied the horizontal paneling on this east interior wall. Simultaneously, Edward and crew continued restoring the south front foundation. The lean-to shelter providing shade for Miguel is not there for his comfort. It is in place to prevent the hot sun from drying the common mortar too quickly when it requires a slow curing for proper hardening.



West Gable – Removal of the protective Tyvek and plywood on this chimney side exposed studs with punky bottoms, unstable deteriorated joints, a replacement north down brace hanging precariously and a severely rotten and split upper oak plate due to years of unabated water penetration. The Abatron and/or West System wood epoxies again stabilized and preserved the ends of the damaged timbers, and Mike spliced in new oak tenons on those that had lost them so the uprights could be fastened into the sill. The method preserves the craftsmanship and materials of the Marshall period as well as later repair campaigns to every extent possible.

By Week 16, the cellar was becoming fully enclosed with Edward's restoration of the foundation, and Mike was about to return the floor boards to their numbered positions on the first floor. Therefore, Cheryl fully photographed the cellar walls, the exposed floor joists and first-floor wall framing. She had earlier fully measured the area. The shot below is one of those taken of the floor joists to demonstrate the round treenail mortises that Thomas Marshall's carpenters used to draw and tighten the floor boards together when laying the planks. Traditionally drilled on every other joist, these mortises continue across the tops of most of The Hollow's joists, and they also appear on the second floor plates. The carpenter would have laid several floor boards down between the raised treenails. He then drove a wedge between the nail and outside floor board. When snugly wedged and joined together, the carpenter nailed the planks to the joists. In 1763-64, he undoubtedly used wrought nails for this purpose.



Restoring the numbered floor boards into the position he had found them in the early summer, Mike modified the colonial technique with board wedges tightened by a steel crow bar.

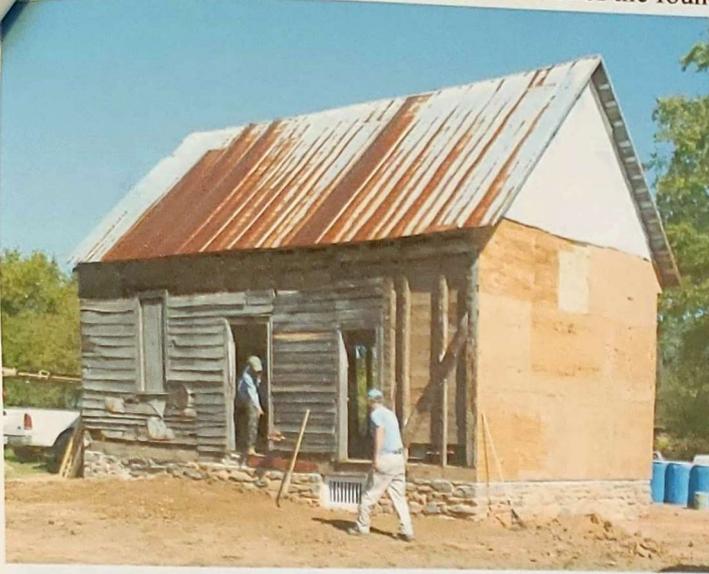


The lower right image exhibits the equally fine workmanship of the stonemasons in restoring the northeast upper corner, including the niche, of the interior east foundation wall. The failure of the back foundation and its reconstruction in the early twentieth century left this foundation disconnected. The corner had disintegrated before April 2005, but stonemasons Edward, Miguel, Alejandro and Francisco have properly keyed the back and front corners into the outer foundation during this 2005 repair.



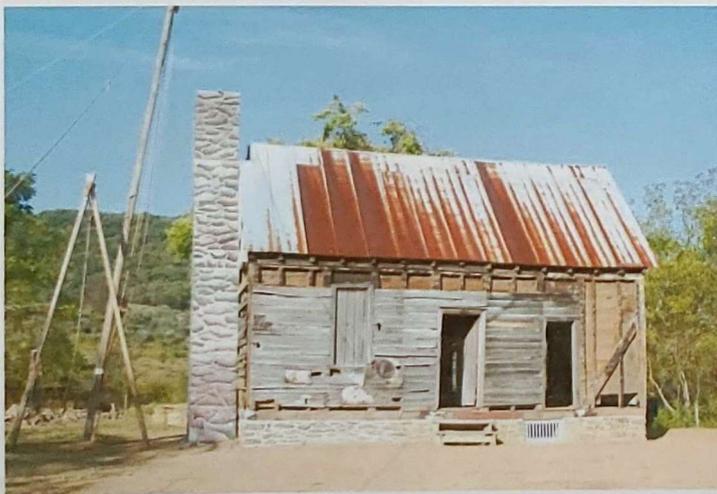
See pages 1 and 2 of Report #5 for discussion on the interior foundation wall which would have provided the expanding Marshall family with a smaller 16-x-20-foot house.

By the end of the week, The Hollow has come a long way, standing as close to straight as the long-settled timbers would safely yield. The completion of most of the foundation work allowed grading and seeding.

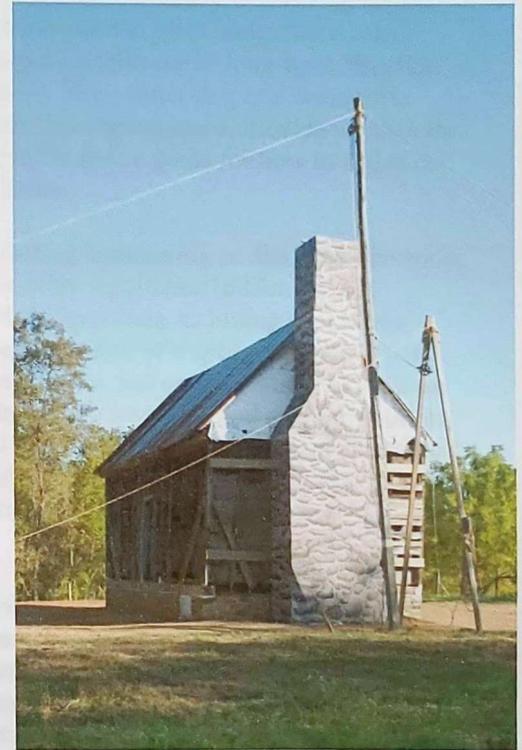


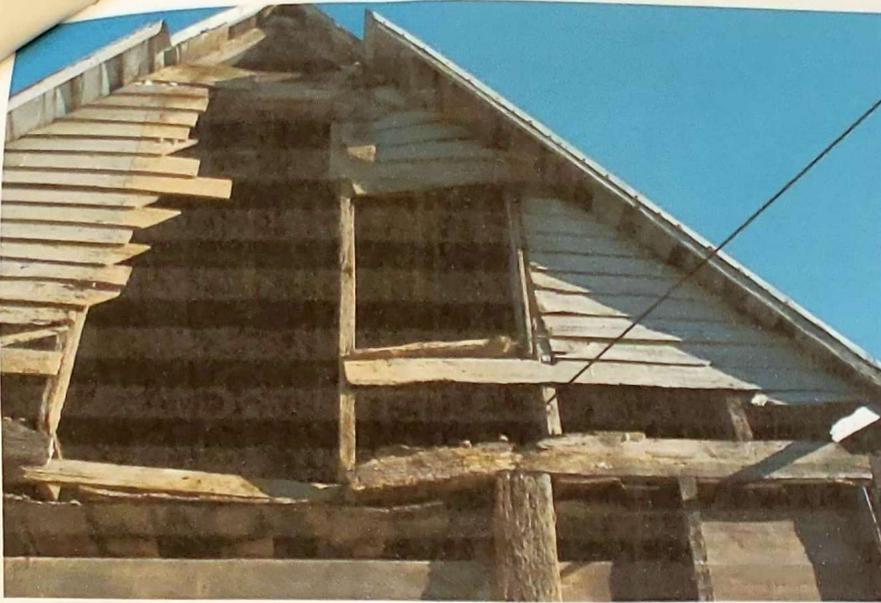
In February, Cheryl interested Fauquier High School art teacher Charlene Root and her art classes of juniors and seniors in a win-win educational project at The Hollow. The concept involved the students' re-creation of the stone chimney for the October 1<sup>st</sup> bus tour. Realizing the opportunity to link tangible local history in the school program, FHS principal Roger Sites also approved the project. Local carpenter Roy Anderson built the frame in sections to exact measurements, and Charlene taught her students to stretch and fasten the drop-cloth canvas, mix paints and apply them according to instructions. Before the actual hands-on work began, Charlene provided background history on John Marshall and his family in Fauquier County and at The Hollow.

Edward and our collective team erected a gin pole to help Mike and assisting APVA carpenters pull the faux chimney sections up to stack them on the west gable. Colonists used a gin pole to hoist heavy materials and framing into place, so the stabilization team enjoyed



replicating the concept for the October 1<sup>st</sup> bus tour participants. On September 30<sup>th</sup>, Chimney Raising Day, the gin pole pulley lifted the heavy sections beautifully into place, and visitors the next day saw pictures of students painting. Edward removed the prop chimney after the visitation and stored the sections in the pole barn.





The split plate on the south-right side of the chimney location is pictured at left. Located under the garret window opening, water dripped down the stud into the mortise in the timber for a long time.

Mike consolidated the north-left plate, but had to replace the split south-right half with a matching oak timber. He applied some epoxy to the tenons of the chimney studs as well. During this process, Mike discovered a wrought shutter dog between the floor and plate under the window location. This thrilled Cheryl because the window framing was crude originally with mortises for hanging in the studs only partly present. The incompleteness left some doubt that the window was executed in this location in period one. However, the heavy weathering on the studs and the plate under the window opening indicate its long-term situation here. The shutter dog is a wonderful archaeological piece of evidence that also guides future plans for how to finish the house.



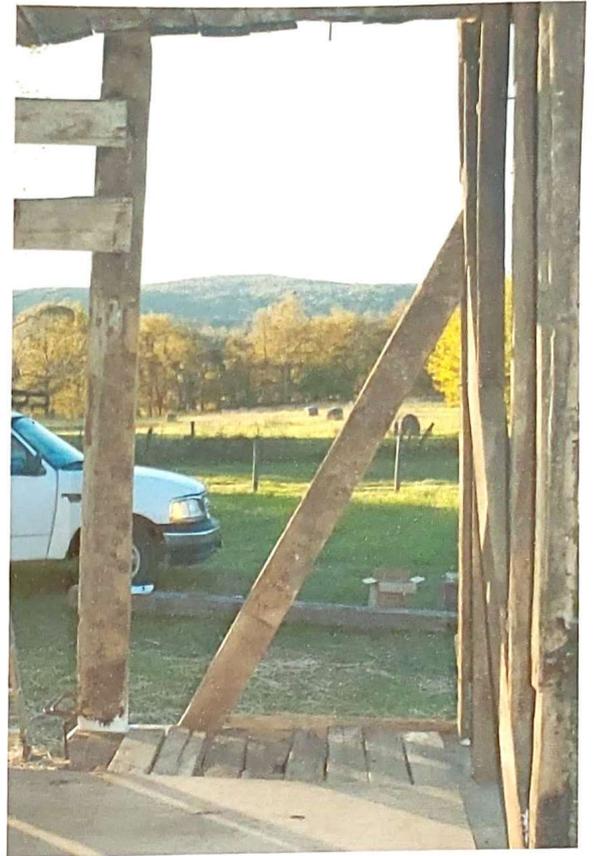
During hammering on the back elevation, another significant hidden artifact dislodged from its hiding spot in the garret – part of a split oak shingle with nail holes and enough length to indicate how they were laid and shaped. Built in 1763-64, the roof would have been wood shingled, but finding an actual piece of tangible evidence is rewarding.



Mike uses a recycled circular-sawn oak member as a replacement for the damaged and too-short bottom of the northwest corner down brace. His craftsmanship is stellar in the joining of the half lap and the angle on the tenon.

The down brace is joined into the sill and nailed to the corner post, as shown in the picture on the right.

Lastly as the cold rainy winds of fall arrived in early November, Mike closed down the 2005 stabilization by fastening plywood sheathing over the exposed walls of the house. He taped the joints to deter water penetration into the outstanding preservation work that he and Edward accomplished this busy season. Looking back to a day in the early spring when Louis Malon joined us for an assessment of the condition of the house, the team discussed minor and major levels of stabilization to ready the dwelling for October 2005. The decision to replace the disintegrated replacement back sill and restore the foundation caused the revelation of deeper threats to the structure than could be seen. We now know that we made the right decision that has saved John Marshall's Boyhood Home and the workmanship of its builders. Profound appreciation goes to Mary and David Collins and The Friends of The Hollow for funding the project.



Due to the conflicts of the APVA's important primary role in preparations for the Jamestown 2007 celebration, the 2006 Hollow plans are to remove the rusted standing-seam metal that has protected the roof and dwelling since the 1980s and apply wood shingles. Edward will reconstruct the stone chimney on the west gable using the stones he removed in 2004. He will

use the same lime putty to create the historic common mortar recipe as done on the foundation, but he will add some better cut rock to make the structure sound. Future preservation and restoration plans include applying new poplar weatherboard, repairing the door and window frames, the doors and restoring the nine-over-nine, double-hung-sash wood windows on the north rear, and perhaps, the four-light casements in the garret. Watch for future reports as the work proceeds.