

From ‘Potato Cave’ to Historic Stone Chamber A Model Restoration

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with Craig Chartier and David Stewart-Smith**

Introduction

The Acton ‘Potato Cave’ is a curiosity lodged in the local consciousness for unknown years. The name is a misnomer: the structure is manmade, built into a drumlin whose sands are as soft as talcum with few embedded stones or bedrock. The idea that the structure was used to store potatoes, never a crop of any significance locally, arose in the mists of time. Theories concerning its builders and purpose are as variable as the investigators who have studied it. Builder theories include Irish Monks, Native Americans, colonial farmers, and Nashoba Brook mill workers. Theories of purpose range from the practical: storage of root crops, apples, cider, vinegar, ice, meat, and furs, to the mythic: ceremonial site for Native American vision quest rituals. Some argue for a summer solstice sunset alignment; others for a winter solstice sunrise alignment. Less mythic is lodging for workers on the nearby (long defunct) Nashua and Boston railroad line.

When the Acton Land Stewards proposed to restore the chamber passage’s collapsing walls, there was no thought of settling these lofty questions. But the proposed project gradually developed into a full-fledged archaeological and historical survey with potential for listing as a Register of Historic Places site. Acton’s ‘Potato Cave’ began its translation into the Nashoba Historic Stone Chamber.

Chamber Description (excerpted from C. Chartier)

The Acton stone chamber is located within 40 meters of the Nashoba Brook and 100 meters from Main Street (Route 27). It may have been associated with the Wheeler Farm, approximately 1/4 mile upstream from the site, but it is much more likely that another farm located at least partially within the subdivision now present to the north of the site included the chamber. It was likely created for a purpose related to the farmstead. When the farm ceased to exist or the use that the chamber served ceased to be practiced on the farm, the chamber went out of use. Overall, the chamber seems to fit with general recommendations of 19th century farmers to locate such structures near water and near the farmyard.

The Acton chamber is similar to other chambers found throughout New England and Putnam County, New York. The passage is 4.4 m. long by 1 m. wide, and the chamber itself is 2 m. by 2.5 m. by 2 m. high. It is an example of the type of colonial architectural construction that served a variety of purposes such as root cellars, animal shelters, feed storage, dairy and cider or vinegar storage, and aging. Acton’s chamber has a long passage entrance. The passage and the chamber itself are of a modified post and lintel design. The entire passage and chamber have an L-shape, a form that occurs less often than not. An unusual feature is a pillar of stones at the junction of the passage with the chamber itself. This feature may have been added after the original construction as an extra support required because of roof slump.

Beginnings

In 1995, the Acton Conservation Commission authorized a Land Stewardship Committee (LSCom), under its direction, whose mission would be the stewarding of Acton’s 1600 acres of conservation land. Much of this land had been acquired during the 1980s, and although laced with informal trail systems, no coherent plan for public access or regulated stewardship had ever been applied. LSCom’s first task was a survey of the 14 major parcels to determine what projects should be undertaken on each to achieve a consistent infrastructure and to preserve and protect any existing structures. During this process the ‘Potato Cave’ was first catalogued on an Acton list.

There was not at the time the slightest Town interest in restoring it, nor indeed even acknowledging its potential for historic preservation. Because of my insistence, it was added to our ‘nice to do someday’ project list and largely forgotten.

During the 1980s, Sue Carlson, Bett Peterson, June Miller, and I developed a site form for recording uniform measurements and other data for chambers. ‘Charlie’s Chamber’—as NEARA then termed it—was surveyed by this group: location, site drawings, measurements, topography, soil type, terrain, photographs, and some local lore were recorded and stored in NEARA’s archives.

In the early 1990s, the late Mark Strohmeyer, an amateur archaeologist interested in unusual manmade stone structures, had conducted a thorough survey of sites within Acton where curious stone structures existed. He had submitted a detailed report to the Town. Natural Resources Director, Tom Tidman, found the report in files he had inherited and thus became aware of stone structures in Acton's woods that someone had thought significant. Tom was skeptical. After I became stewardship chair, I occasionally mentioned these structures, particularly the chamber, with just a few facts to pique his curiosity.

With gentle prodding by Laurie Ullmann, a land steward living close to the chamber and knowledgeable about Acton's history, together with my unrelenting arguments for the chamber's protection, eventually Tom was persuaded the structure should be preserved.

Turning Point

In 2000, the Massachusetts legislature passed the Community Preservation Act, allowing individual towns to set aside up to 3% of their property tax revenues—with conditional matching funds from the State—to undertake projects meeting specific criteria in four categories, one of which is historic preservation. Acton adopted the Act in 2002 (at 1.5%), and Tom went into action. The first funding cycle was heavily subscribed by acute projects, but at the beginning of the second cycle, Tom persuaded Acton's Town Manager, a man not given to bushwhacking through the woods in his pressed pants and immaculate shirt and tie, to take a look at the chamber. Soon we were asked by the Community Preservation Committee (CPC) to submit a proposal for the restoration of Acton's Potato Cave.

Funding and Permits

By this time, LSCoM, with a minimal budget and lots of volunteer help, had completed a number of projects with visibility, success, and no interference from a Conservation Commission too burdened with numerous applications for wetlands variances to pay us much attention. Innocently, we assumed that our small, uncomplicated, straightforward chamber restoration project would sail through the same uncomplicated waters; we were about to get our first lesson in bureaucracy and political practice.

At the first CPC hearing in December 2005, we presented a general outline of the project's intent—to restore the collapsed east and bulging west wall of the chamber's entrance passage. We asked for \$20,000, \$10,000 of which was unspecified. It seemed like a good number. There, we learned that the local Historic Commission would expect an archaeological component to be conducted following strict guidelines; a permit from the Mass. Historical Commission would be required; and a survey, completed by an accredited archaeologist, would have to be carried out so the site could be added to the state's inventory of historic places. Additionally, the Acton Historical Commission would assign a member to oversee the project to ensure regulations were properly observed.

Since most CPC members could not visualize what this structure was, we were asked to lead a field trip to the chamber in December. There I was told privately that the CPC did not look favorably on the unspecified \$10,000 in the application.

Considerably daunted, in January we made a PowerPoint presentation to the full CPC, with citizen audience, showing background photos of the chamber from inside. We asked for a pared down \$15,000, to cover not only the restoration, but also an archaeological component and informational panels to be erected at the site as well. This last item we leveraged against unexpected expenses for the substantive portion of the project, promising that LSCoM would fund the panels itself should the \$15,000 not cover that expense. We announced the committed financial contribution from NEARA. After several anxious weeks, we were notified that CPC would include the Chamber Restoration Project in its 22 projects recommended for 2006 in a single warrant article at Town Meeting. The CPC was recommending \$20,000, to cover contingencies!

But the full gauntlet was not yet run. The Historical Commission wanted a field trip in February, and though enthusiastic about the project, still apparently felt LSCoM could not be trusted to comply with complicated state regulations. Whatever political capital LSCoM had acquired in a decade of successful projects did not automatically transfer to a town project requiring MONEY! The Board of Health weighed in with requirements for two curation facilities: one for temporary storage of the anticipated several baggie's worth of artifacts to be recovered from the site; the other for their permanent curation. And the Finance Committee (FinCom), the WATCH DOGS of the taxpayers' property tax money, wanted to know, "Why should we spend \$20,000 to fix up a pile of stones, and what would we have to show for it afterwards?" I led another field trip in March through the snow with bronchitis, and

the skeptics fell silent. FinCom recommended the project, though not unanimously, and the chamber project item on the warrant article was not even challenged at Town Meeting. We had our funding!

By then, Craig Chartier had been selected as project archaeologist, and, having done the necessary background research in anticipation of funding, he sent off his permit application the next day.

Selecting the Team

In the summer of 2004, anticipating funding from the newly-formed CPC, I asked David Stewart-Smith and Sue Carlson to visit the chamber to make preliminary assessments concerning its restoration. I had worked with David, a very fine dry stone mason, on a small restoration at Mystery Hill years before, and Sue, as mentioned above, had studied the chamber during the early 1980s. Both were interested in the project. I then asked Curt Hoffman for archaeological support should such a component be required. Curt declined, and the project languished during CPC's first funding cycle.

When it was clear in the winter of 2005/2006 that our application was being seriously reviewed by CPC, I asked June Miller, title-chain researcher and participant in the 1980s chamber site-report team, whether she could perform some deed research. It seemed practical to learn what we could about the chain of owners. She readily agreed, despite the inconvenience of getting to the Cambridge County Courthouse for the Acton land records. Lastly, I asked Rick Lynch, then President of NEARA, to find us a suitable archaeologist, which he promptly did in the person of Craig Chartier.

During this period, Rick and I worked out a mutually agreeable plan for NEARA's financial contribution and the selection of volunteers. NEARA would supply experienced volunteers for the archaeological work; LSCom would provide inexperienced volunteers to do the non-technical work.

Additionally, I made requests to both organizations that all volunteers be vetted by me and that ultimate responsibility for volunteer coordination and logistical issues would be mine. Earlier experiences with volunteers had made clear how important good working relationships on site among team members would be and that a single authority to make decisions in the field was essential for the project to succeed. Tom Tidman insisted I contact the Mass. Ethics Commission to ensure that engaging people known to me personally would not later cause a conflict of interest. I was reassured. About that time, I stepped down from the NEARA Board to deflect in advance possible adverse speculation about the personnel selection process.

Next, Kimberley Connors, newly-appointed member of the Acton Historical Commission, with a degree in archaeology, was assigned as liaison between the Commission and LSCom. We met at the chamber site in early May, swatting black flies and flicking ticks dropping on us from the trees, and recognized each other as appropriate partners.

Publicity

Two local newspapers were contacted: the local weekly, the *Beacon*, published a lengthy front page article on the project in late May as the site work began. The Boston Globe Metrowest section carried a well-written and comprehensive Metrowest front- page article about a week later. Seasoned reporter, Sally Heaney, did News Briefs into the summer.

LSCom and NEARA webmasters were enthusiastic and cooperative in uploading ongoing progress reports together with pictures.

Local word-of-mouth publicity, supplied by town committees and flyers distributed at Town Meeting, was well-received. Folks who thereby became interested in the project helped in various ways, working on site faithfully under difficult conditions, submitting to me books, articles, and CDs.

Logistics

Logistical issues included site preparation, access, and safety; materials deposition; volunteer recruitment; scheduling of reporters, volunteers, and photographers; and acquisition of site equipment.

- In early spring, the municipal properties crew cleared brush, cut a few small trees, and installed plastic fencing and caution tape at the site. "No Trespassing" signs and a Project Description panel were put up. Large tarps, donated, borrowed, or purchased, to prevent erosion during heavy spring rains and provide covered storage for sifted and un-sifted soils during the digging and back-filling phases were acquired.

- Two unused accesses were brushed out: one along an easement crossing an abutter's side lawn—for foot traffic only; the other along an unused railroad bed from Rt. 27 to a short side-trail to the chamber site.
- Materials deposition included cribbing timbers, trap rock, and walling stones brought down the disused railroad bed by town dump truck and backhoe. Walling stones were culled from the town's materials depot, where deconstructed stone walls had been stockpiled.
- After cribbing timbers were set inside the chamber, only chamber team personnel were allowed on site. The plastic fence secured both entrances. The entire site was covered after each work session with heavy tarps anchored with heavy timbers and stones.
- Volunteers for site work, signed up ahead of the start date, were recruited from LSCom, NEARA, and townsfolk intrigued by the advance publicity. Scheduling was done day-by-day, depending on weather, and manpower requirements.

Kimberley Connors shared oversight of each day's work, supervising the technical work while I put out brush fires, recorded volunteer hours, collected fieldwork notes made by archaeologists, masons, and others. An assigned volunteer photographed the progressing work each day. Artifacts were bagged, dated, and labeled as they were recovered. Cell phones and a local phone directory were indispensable.

- The masons, archaeologist, Kimberley, and myself supplied sifting and digging equipment for volunteers. The workers brought their own water, bug repellent, hats, sunglasses, snacks, trowels, cameras, buckets, other paraphernalia, and dogs.

Background Research

Background research was conducted to place the stone chamber within a context of the history of the Town of Acton as well as within the context of the history of the property. The working hypothesis was that this complex was part of a larger farm or industrial complex that provided the farmer with income additional to that gained from farming.

Archaeologist's Report. (Excerpted from C. Chartier)

What eventually became Acton was originally part of the Christian Native community of Nashoba and part of the Euro-American town of Concord. Native and English settlement originally focused in the Nashoba Brook area, which includes the chamber site. Euro-American settlement began in the 1650s and has continued to the present day. By 1735, Acton's incorporation date, the town's economy focused on apple production and mixed agriculture. Industrial development supported the apple industry with saw and stave mills being constructed along the Nashoba Brook.

The history of Acton during the Plantation Period (1620-1675) is intimately tied to that of Concord to the east and Littleton to the west. After the smallpox epidemic of 1633, John Eliot, an evangelical missionary to the Natives, began organizing the remnants of the Native communities living around Boston into seven 'Praying Indian Towns.' The northern portion of Acton, in the area of the present Nashoba Brook Conservation Land where the chamber is located, together with contiguous Spring Hill Conservation Land, was part of the Nashoba Praying Village established by Eliot in the mid-1600s.

It is known that by 1669 Captain Thomas Wheeler of Concord had leased land, constructed a house and grist mill on Nashoba Brook, and was keeping cattle for the people of Concord. Wheeler may have acquired land that was abandoned by the Nashoba Natives during the years of the Mohawk raids. The Wheeler farm consisted of 260 acres of upland and meadow northwest of Nashoba Brook near present-day Great Road. A farmstead, today represented by stone foundations of a house, barn, outbuildings, and a cattle droving corridor, and lying approximately 1/4 mile east of the chamber, is believed to be his.

Colonial Period (1675-1775) settlements were focused in what later became Acton Center and around Wheeler's Mill, where an iron furnace was constructed in the early 18th century by Joseph Harris. Nashoba Brook saw the establishment of other saw and grist mills throughout this period as well. By 1738, the stone complex (above), together with grist and saw mills, appeared at the end of what is now Wheeler Lane.

While mixed agriculture, primarily at the subsistence level, was the dominant economic activity prior to King Philip's War in 1675-1677, apple growing became the primary crop in the 18th century. Orchards were located around the town, but especially in the area of Nashoba Brook and the stone chamber. The apple industry, with primary products being cider and vinegar, retained a dominant position in Acton's economy throughout the 18th and

into the early 20th century. Along with the apple industry, an increase in cooperage, the making of barrels used to ship apples, cider, beef, pork, etc., increased to the point that in 1757, a Culler of Shingles and Staves was elected by the town to inspect the quality of the coopered wares.

The Federal Period (1775-1830) brought improved roads and expansion of mills and cottage industries in town. The 1797 map of the Town of Acton shows an orchard located in the project area. No other orchards are identified on this map, making it likely that the orchard was of notable size or possibly the only one in town at that time. The map also shows the mill pond, still present to the immediate east of the stone chamber, indicating that this was a location of early industry, possibly that associated with Wheeler's occupation of the nearby area.

The 1832 (early Industrial Period, 1830-1870) map of Acton shows a saw mill located at the southern end of the mill pond near the stone chamber site. It also shows a structure located on the south side of the road extending from what is now Route 27 down to the saw mill. This structure is in a position to likely be the stone chamber.

Deed Research. (Summary from Hobbs Abstract Co.)

A title search of the ownership chain for the land on which the Acton Stone Chamber is located was conducted by June Miller of Hobbs Abstract Company of Worcester, Massachusetts, during July of 2006. This search revealed that Moses Woods, a blacksmith and Revolutionary War veteran, was the first owner of the land on which the stone chamber stands. It is recorded that Woods stated around 1837 that he had lived in the house that he then occupied since 1774 and had lived in town since 1771.

Woods' homestead was located on the westerly side of the road from Stow to Carlisle (Main Street/ Route 27). On the other side of the road and just south of the homestead was a 13-acre parcel, also part of the Woods' farm, on which the stone chamber was located during the years of Woods' ownership. It seems likely that the chamber was associated with the homestead.

Moses Woods died in 1837 but had earlier deeded "two acres of pasture and woodland near the dam with a shop standing on the same with a privilege of flowing for the use of the said shop," to his son Aaron. The dam is likely the one located on Nashoba Brook close to the stone chamber, making it possible that the stone foundation remains adjacent to the chamber was Woods' blacksmith shop.

Aaron Woods, owner of the land from 1837 to 1872, died intestate, the victim of murder. The inventory for his estate listed land valued at \$800.00, a barn at \$125.00, and his shop at \$5.00. The (slightly later) 1875 map of Acton does not show Woods' house on the western side of the road, but it does show houses of a Mr. Harris to the north of the chamber and a Mr. Smith to the south.

The Woods' land had remained in the family for approximately 100 years until 1875, when a 13-acre parcel on both sides of the railroad was sold to Simon Tuttle by Aaron Woods' administrator. In 1876, Simon Tuttle's probate inventory included the "Woods lot" of 13 acres valued at \$550.00 and "rent of ice house." Our stone chamber may have been used as an ice house.

Archaeology

Theory. (Excerpted from C. Chartier)

Archaeological findings that can address some of the topics relating to the agrarian life before and after the Revolution and into the Industrial Age include material culture, foodways, the spatial organization of the farmstead, evidence of any change or evolution in that organization, evidence of agricultural specialization, and work areas. Features that were looked for during the Site Examination that have the potential to add to our understanding of these topics include a builders' trench associated with the stone chamber, deposits on the floor of the chamber and passage, and deposits within the adjacent stone foundation. Findings from these areas, combined with the background research, it was hoped would identify the owners of the property and trace the history of it.

For this Site Examination, two categories of research were examined in the area within and surrounding the chamber. The first is processes or relationships that have been instrumental in shaping the environment, such as spatial organization, land uses and activities, responses to natural features, and cultural traditions. The second is the physical components or features that make up the environment, such as circulation networks, boundaries, vegetation related to land use, structural types, cluster arrangements, archaeological sites, small-scale elements, and perceptual qualities.

Field Methods. (Chartier, continued)

Site Examination testing was limited to areas immediately adjacent to the stone chamber. The intent was to assess site integrity, research potential, and eligibility for inclusion in the National and/or State Register of Historic Places. The site was thought to be eligible for nomination under Criterion D as a historic or prehistoric site.

The archaeological testing examined and recorded methods of construction of the walls and determined original floor level in the passage, which was clogged with silt as a result of the east wall's collapse. Investigation of the adjacent rectangular stone foundation and the area between the chamber and that foundation was thought to be appropriate. By examining the builders' trenches, the passage's mound, and the passage itself, artifacts might be recovered that would help to establish construction date and purpose of the complex.

Field Activities.

Archaeology and reconstruction were at first interleaved and later conducted concurrently. The archaeology was carried out by Craig Chartier with assistance from Kimberley Connors, experienced NEARA volunteers, and local volunteers from Acton and Carlisle. Chartier first opened three test pits in the easterly stone foundation. Although work in this enclosure had not originally been proposed by the Land Stewards, Craig reasoned that the two structures must have been related during some period of their use, even if not built at the same time. Several nails from three different periods of nail manufacture were found, including hand-wrought ones.

Next, three meter-squares were opened along the wall west of the passage. Each EU was dug to a level of color and texture deemed to be the hillside's level during the structure's construction. The gradient of these original levels consistently sloped upward from one EU to the next higher one. The ordering of the backfill layers also strongly suggested that the material used was soil removed from the hillside itself to create the space into which the chamber structure was later built. The fact that no builders' trench was encountered in any of the excavation units supports this supposition. A depression west of the structure may be the remains of a borrow pit which supplied additional material for mounding those parts of the structure not covered by the hillside's natural contours.

Artifacts and data from the west-side EUs were recorded. Then four EUs were dug to original soil levels on the east side, where the collapsed wall had stood. Small artifacts were found throughout these units, mostly 18th through 20th century in origin. One slightly damaged point, thought to be from the Neville culture, existing regionally 8,000 to 9,000 years ago, also was found. Because all recovered artifacts were found in disturbed soil, none were suitable for scientific dating.

Removed soils were sifted for artifacts—later evaluated by one of the archaeologists—and placed on large tarps for later backfilling. Artifacts were bagged, labeled, and dated. Trap rock and walling stones were stockpiled at the site by the municipal properties crew during the archaeological excavations. West side EUs were left open, to provide a work trench for the west wall reconstruction. East-side EUs were backfilled with sifted soils recorded for color, consistency, etc.

Later, after the completed wall reconstructions, additional archaeological work was conducted in the passage. Three EUs were dug to the level—determined by the wall's foundation stones—of the original floor. Sifting and evaluation of the removed soils was again conducted.

Restoration

Purpose

The restoration aimed to re-establish the stone chamber's condition to resolve both the existing danger of further collapse and to preserve certain architectural principles applied during original construction. During the past 40 years, the chamber had suffered severe deterioration due to both human and environmental factors. The forward roof slab was only partially supported by the passage's west wall, resting on the ground at a 45-degree angle; the west wall showed an ominous bulge with large separations between stones; and the east wall had collapsed. Because the chamber sits on public land with open access, the potential for further collapse dictated that it must either be rebuilt or demolished.

Method

The masons placed cribbing timbers on the inside to support the passage roof slabs, and then raised the slabs slightly off the tops of the existing walls by successive placement of small wooden wedges. Volunteers removed the soil off the three forward slabs, and, as volunteer density onsite increased, transformed the west side EUs into a trench wide enough for a man to stand in and deep enough to expose the wall's original foundation stones. There was much excitement as the undressed roof slabs were gradually exposed and exhibited the precision with which they had been interleaved so as to drain water away from the structure.

The trench eventually stretched the exterior length of the bulging west wall. As new portions of the wall were exposed by the volunteers, the two masons—David Stewart-Smith cramped between cribbing timbers and roof slabs on the inside, and Pete Wiggin standing in the trench on the outside—first took down the existing wall stones, and then rebuilt the wall from the inside on existing foundation stones upward to a height necessary to eventually support the roof slabs.

As many as twelve volunteers were on site at one time, with Kimberly overseeing the soil removal and sifting. Work progressed rapidly. While some workers dug soil away from wall stones, the more muscular volunteers ‘schlepped’ filled buckets of soil between wall and sifters, set up at three locations on tarps. Other volunteers supplied walling stones and trap rock to the masons. The wall restoration progressed from back to front. Pete selected stones for David to build with inside while jamming trap rock between newly reset walling stones outside. Backfilling was done with sifted soils as portions of the wall were completed.

At the passage’s entrance, the most disturbed area, the masons were surprised to find two large facing stones on either side of the passage entrance set deep into the ground. These appeared to be two halves of the same original boulder, but stones securely positioned above them made it impossible to verify that speculation. The masons were also surprised that these stones were set much deeper into the ground than the bottom row of stones found along most of the wall. Eventually, it became evident that the original floor level of the passage had been lower than supposed, supporting assertions from local seniors that it had once been possible to walk upright into the chamber.

On the passage’s collapsed east side, so many stones were missing that guesswork was required to determine exactly where the passage wall had originally stood. As the delicate process of raising the partially-fallen forward roof slab from its slanting position to horizontal and underlapping the second roof slab was completed, the outline of the entrance finally took shape. The east wall was quickly reconstructed, as there were few stones to remove and comparatively little soil to be dug out.

With passage walls complete, the cribbing timbers were removed one by one by using a succession of wooden wedges as temporary replacements together with a winch and small jack, until all roof slabs again rested securely on the rebuilt walls. Since the original configuration of the entrance was unknown, David replicated a style observed at other chamber entrances. Short retaining walls holding back the hillside on either side of the entrance were wrapped into the entrance stonework. This phase of the work was lively and tinged with excitement as roof slabs, reformed walls, and entrance stones were gradually all brought into alignment.

Finally, the remaining trap rock and sifted soils were used to pack all trenches and replace the overlying soils to replicate the chamber’s original appearance.

Site Restoration

All backfilling, with soils removed from the mounded top and the trenches, has been completed. Several cubic yards of loam have been brought to the site and will complete the east side contour of the mound in the spring, when re-vegetation will also take place. A conservation mix, and low, shrubby plants, such as ferns and blueberry, whose shallow root structures will hold the soil without encroaching into the stones, will be planted.

Final decisions regarding trails, signage, and public access are still to be made. Site maintenance will fall to the Land Stewards. A special site steward (neighbor and project volunteer, Linda Schymik) has been appointed to inform the Committee of site needs and is authorized to report vandalism directly to the police.

Educational/historic panels will eventually be erected at the site. NEARA, the Land Stewards, and the local Historic Commission will contribute suggestions to information for display.

Findings

Archaeological. (Excerpted from C. Chartier)

Excavation Units and JTPs. Because reconstruction of the passage walls impacted both the exterior portion of each wall and the interior of the passage floor, testing was carried out in both areas. Three excavation units (EUs) 1 x 1 m. were opened adjacent to the external west wall, and one 1 x 1 m. EU and two 1 m. x 50 cm. EUs along the east wall. Testing within the passage consisted of four EUs 1 m. x 50 cm. adjacent to the interior of the west wall.

Additionally, three 50 x 50 cm. judgmental test pits (JTPs) were excavated within the stone foundation east of the chamber. The purpose of these test pits was to determine whether there were artifacts that might suggest a use for this stone-walled enclosure. If nails or other architectural debris were recovered, then it might be assumed that the

enclosure was a foundation that once supported a wooden over-structure. If few or no artifacts were recovered, then it would be more likely to have been used as an animal pen.

Two additional test pits were excavated on the exterior east and west sides of the passage. These were placed to search for evidence of a builders' trench.

JTPs. The three test pits within the stone foundation yielded 18th to 19th century artifacts including two hand-wrought nails and 13 machine-cut nails, as well as more recent fragments of bottle glass, wire nails, tar paper, and blue transfer-printed whiteware. These artifacts were consistent with those recovered from outside and inside the chamber itself, indicating a contemporary use of the two areas. An abundance of machine-cut nails within hearth deposits inside the chamber may indicate a dismantling and burning of timber associated with a structure possibly located in the area of these test pits.

JTP1 yielded 12 artifacts (machine-cut nails and charcoal); JTP2: 38 (whiteware; charcoal; machine cut, hand-wrought, and wire nails; tar paper; and clear glass); JTP3: 8 (clear glass). JTP4, to the west of the chamber entrance: 190, including modern material (clear machine-made bottle glass, plastic, .22 cal. bullet, recent charcoal) and potential late 18th to 19th century artifacts (creamware, hand-wrought and machine-cut nails, thin light aqua and light olive vessel glass, redware tea pot fragments, and pearlware). JTP5, on the east side of the entrance: 32, most of modern material (clear glass, an aluminum pull tab, whiteware, and plastic). Potential 18th to early 19th century material was limited to one piece of creamware similar to the pieces from JTP4.

West-side EUs. All three west-side EUs displayed the same soil stratigraphy. Soil analysis shows that following the erection of the stone walls and their capping with schist roof slabs, the structure was mounded at least partially with soils that had been excavated from the hillside to form spaces for the passage and chamber. As no builders' trenches were found outside the chamber, it is likely that passage and chamber spaces were dug first, and the walls were constructed from the inside within the excavated spaces. Had builders' trenches been found, it would be likely that walls were built first, and the interior excavated afterwards.

These 3 EUs produced 172 artifacts, of which four were different kinds of nails, and 135 were pieces of charcoal. The chamber's construction period may have included an episode of burning at the site, to dispose of cleared brush, for cooking purposes, or for land clearing. The relative paucity of artifacts indicates the exterior west of the chamber saw little activity.

East-side EUs. As with west side EUs, all three east-side EUs displayed the same soil stratigraphy. Here, 143 artifacts were recovered, the majority (136) being charcoal or burned wood. The remainder comprised three nails, three creamware fragments, and one projectile point—a shaped flake of Melrose green rhyolite.

As with the west-side EUs, the relative paucity of artifacts indicates the east exterior adjacent to the chamber saw little activity, but the recovery of a machine-cut nail may help to date the construction of the chamber to the 19th century.

Interior EUs. Soil stratigraphy in the three EUs opened in the chamber's entrance passage duplicated that found in the other EU groups. Contents of the several layers suggest strongly that after the chamber's abandonment, the location was used, possibly as a camp or habitation site, in the late 19th century and again in the late 20th century. After the chamber's original use was abandoned, and continuing into recent times, some factor in the local environment changed, causing dramatic increased erosion. Most recently, the subdivision at the top of the drumlin, with clearing of vegetation on the summit and hillside associated with the chamber, would certainly have changed water and wind patterns. Local rumor has it that the east side wall collapse resulted from the toppling of a tree that grew at the junction of passage and chamber by one of the 20th century's great hurricanes. Stones fell and were quickly buried.

The passage EUs, however, yielded 990 artifacts. The majority (356) were floral material (charcoal, possible worked wood, and charred wood fragments); modern refuse (275) (bottle glass and related hardware, whiteware, cans, wire nail, bullet, tar paper); and 178 mortar pieces, presumably from the walls of the passage. The remaining artifacts are 19th -century products (machine-cut and hand-wrought nails, ironstone, clay pipe stems, iron wedges, iron buckle, pearlware, and aqua flat glass) and material not assignable to any specific period. The mortar was found throughout the excavation and is believed to have been used in the passageway at least, if not in the chamber proper. It appears to have chipped out and fallen onto the floor over the course of the years the chamber existed. Two recovered iron wedges could be the tools used to split the facing stones set at the passage and stone foundation entrances. (See below under Architectural Findings.)

The ironstone pieces and the clay pipe fragments—artifacts recovered on the original floor—establish a *terminus post quam* of pre-1891 for the pipes and from 1817 for the ironstone. The pipe fragments are from one pipe, stamped “Davidson/Glasgow,” indicating manufacture by Davidson in Glasgow, Scotland before 1891. The McKinley Tariff Act of 1891 required imported items to be stamped with their country, not city, of origin.

Architectural (Excerpted from D. Stewart-Smith)

The back chamber is well-built of granitic schist and laid up by a professional crew, providing very tight, level courses in the stonework. These stones were quarried specifically for this construction, probably from a local source, which should be sought. The passage, in dramatic contrast, is constructed of large, rounded field stones, collected locally. The passage stonework in both construction and layout is more casual, being much less professionally laid up.

The axis of the passage runs almost exactly magnetic north and south. Older walls [observation of Stewart-Smith] are often out of line by several degrees with the magnetic axis, because of the changing declination of the magnetic poles. If a wall was built to align with the magnetic north/south axis, the more recent it is, the more likely it is to line up with the modern axis.

David writes: “It is our [Pete Wiggin’s also] speculation that you have an ice house and/or meat locker.” [This speculation was submitted before the finding of the rents collected for the storage of ice in Simon Tuttle’s estate inventory came to light.] There is ready access to a ponded section of the brook, good sandy soil for drainage, and minimal exposure to the sun. The chamber could have been packed with meat and ice, creating a very effective refrigerator. We assume that the chamber was secured in some way to prevent marauding bears and people from breaking in. There is no vent in the chamber, which suggests that the storage area was well-supervised and any rotten meats removed.”

Further: “It is relevant in this regard to note that mortuaries in New England are vented, allowing the bodies awaiting burial inside to decompose somewhat before burial after the spring thaw. Basically, the design and purpose [of the chamber] are the same. A meat locker would have been a successful venture for someone supplying meat in the warmer months. This theory doesn’t fit in with Druidic astronomy or Praying Indians, but it suits the purpose and location of the buildings.”

The masons expressed surprise at finding no true foundation stones supporting the forward length of the passage’s west wall, noting that the forward quality of the stonework changed. This anomaly suggests either that the chamber and passage were constructed at different times, or that an earlier passage collapse had been repaired at a date later than the original construction.

Also of great interest are two pairs of large, facing stones, one delineating the entrance to the chamber’s passage, and the other forming the entrance to the stone foundation. Both pairs are set so that the flat surface of one stone faces the flat surface of the other. Careful inspection of the pair at the easterly foundation entrance shows them to be two halves of the same original boulder. Slight irregularities in the faces, together with a white vein that runs through both stones, make it clear that the two faces would fit together. No drill or wedge marks are evident, suggesting an early though purposeful fabrication. “Pete Wiggin and I” writes David, “have frequently discussed ... the split stones at the entrance to the chamber and entrance to the stone foundation. They seem to be a sort of signature left by whoever laid the buildings out.”

Interpretation (Excerpted from C. Chartier)

Interpretation of the Acton Stone Chamber follows Locard’s exchange principle, a concept well-known to criminologists, which states that when two objects come in contact, they exchange particles. ‘Wherever he steps, whatever he touches, whatever he leaves, even unconsciously, will serve as a silent witness against him. ... All ... bear mute witness against him.’ This principle has equal applicability to archaeological evidence: actions at sites leave traces. Whoever built or used the Acton Stone Chamber left traces of their presence there. It is up to the archaeological process to collect facts which place the chamber and its construction within a solid time frame and interpretation.

The earliest evidence found at the site is the recovered possible Middle Archaic rhyolite point from EU4. Unfortunately, this point was lying in re-deposited and mixed fill from an unidentified source. It had been moderately pressure-flaked at the lower corners to produce a Neville-like projectile point shaped with some very light pressure flaking along the blade’s edges. The limited amount of reduction applied to this point and its recovery from Layer 2 is ambiguous: was it a true Neville-style projectile point produced during the Middle Archaic, or just a

point that happens to look like one? The flake itself has not been modified on either surface and still maintains its curvature, making it essentially an unusable point. Because of its poor craftsmanship, it could be a reproduction or a more recent attempt at creating a projectile point.

Excavation of all units outside the chamber was carried out well into the original ground surface and subsequently into the B1 horizon below it. No other evidence of Native occupation at the site was identified, indicating either that the point was carried in from outside during or following the construction of the chamber, or that the point was deposited in isolation at the site prior to the chamber's construction and subsequently incorporated into the overburden making up the mound covering the chamber. In either case, the fact that the point was an isolated find and was recovered from a disturbed context, makes it of little archaeological value for interpreting the chamber's location in time. Middle Archaic material was recovered from the opposite side of town, at the Pine Hawk site. Thus, the recovery of another point possibly dating to that period is not surprising or unexpected.

Materials such as creamware, pearlware, and hand-wrought nails, dating to the late 18th to early 19th century and recovered from JTPs 2 and 4 as well as EU8 were located within the stone foundation to the east of the chamber, at the western side of the passage entrance, and within the passageway itself. The recovery of hand-wrought nails from both the stone foundation and from EU8 may indicate that the wood that was burned in the later 19th century in the chamber originated from the eastern stone foundation.

The past has always formed an important ingredient in history regarding the way a person, group, or nation identifies itself. Even in the face of facts that dispute the legends that surround sites and persons, the stories are slow to change. Much of this has to do with a way of 'demonstrating the sense of continuity or allegiance to the past,' spoken of by Michael Kammen in his *Mystic Chords of Memory*. Bronislaw Malinowski said "Myth is a story about the past which has the function of justifying the present and thereby contributing to social stability."

Anne Yentsch, in her 1993 work on the relationships between material culture and American ideology, stated that "Material culture, the core of archaeology, is thus an active agent through which a people's mytho-history is held and told to succeeding generations." Included within oral history are houses and sites believed to be connected with the mytho-history of the town or country. In Yentsch's words, "... oral tradition indisputably embodies folk history. If legends about old houses are an expression of American mythology, then encoded within them is ethnographic information on social values and folk ideas about kinship, community identity, society, history, culture, and nature.... which ... form a moral system and a cosmology as well as a history, embodying a set of folk beliefs expressing social ideas and values and situating people within society."

Summary of Findings

The salient findings of the combined researches suggest:

1. The chamber and the passage were either built by different builders at different times, built within the same timeframe for purposes which did not require equal quality in their fabrication, or rebuilt after a post-construction collapse of the passage.
2. As no builders' trenches were found, it is likely that the hillside was excavated first and the structure built from the inside and then mounded over.
3. The passage and the easterly stone foundation were use-related during the late 18th and early 19th centuries and likely built by the same builder(s).
4. Both structures were present on Moses Woods' post-Revolutionary War farm.
5. The stone enclosure was likely the foundation of Moses Woods' blacksmith shop.
6. It seems possible that during the mid-to-late 18th century the chamber was used for storage of apples and/or apple products, and that during the mid-to-late 19th century, likely was used for ice storage.
7. Both structures were used again during the late 19th and late 20th centuries for unknown purposes, probably unrelated to their original uses.
8. No current evidence suggests a Native American origin or use for either structure.

These tentative findings are so intriguing that the archaeological survey will be extended into 2007 and will focus on areas surrounding the walls of the easterly foundation, and the interior chamber near its back wall.

Publicity, taken as a whole, has firmly established the Nashoba Brook Stone Chamber in the awareness of many in its region. The project has given Acton in general, the Land Stewards in particular, the Acton CP funding program, as well as NEARA, additional visibility and credibility in ways that should further our interests into the future.