



SOCIETY *for*
HISTORICAL
ARCHAEOLOGY

The SHA Newsletter

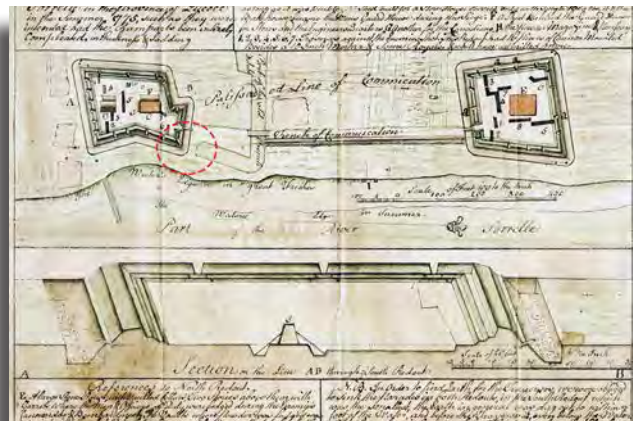
Quarterly News on Historical Archaeology from Around the Globe

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President's Corner

J. W. (Joe) Joseph

As December rolls around and we work on our presentations, make travel plans, and look ahead to SHA's annual meeting in Fort Worth, we are all thinking about both the past and the present. Historical archaeology and the world are in a much different place now than in 1967. However, the November U.S. elections provide uncertainty on what the coming years may hold, and thus task us with including the future in our discussions and debate. It is useful to reflect on where we have been and where we presently are to generate thoughts on where we want to be and how we can get there. I will tackle the past and present in this column.

The inaugural Special Committee meeting that resulted in the formation of SHA was attended by 14 individuals, all of whom were faculty or staff of universities, museums, and federal and state government, with the exception of J. C. Harrington, who had recently retired from the National Park Service (NPS) and was then working for Nauvoo Restoration, a nonprofit. The Special Committee members were all male—12 were based in the U.S., but the gathering also included representatives from Mexico and Canada (Edward Larrabee, who was educated in the U.S. and had worked for the NPS, transitioned to Parks Canada in the early 1960s). That gathering, held at Southern Methodist University, debated the need for a society dedicated to historic sites. Historical archaeology at that time was an emerging field that, in North America, focused primarily on significant sites from early colonial history, with a strong emphasis on fortifications and colonial settlements. This interest in sites of the historic period was not well received by the national and regional archaeological societies of the era, who viewed archaeology as the study of the Native American past, and who saw no need for archaeology on sites that they considered already documented through the historical record. In his autobiography, Stan South recalled having requested time to present a paper on his work at Brunswick Town, North Carolina, at the 1958 Southeastern Archaeology Conference (SEAC), only to be denied a speaking slot because, he was told, SEAC was a conference on "Indian Archaeology."

North American historical archaeologists of the era presented their work at the meetings of state and regional historical societies as well as archaeological gatherings. Those who interacted with historians recognized the differences in theoretical and philosophical perspectives between history and anthropology, and also recognized that historical archaeology had its own methodology, one that borrowed from both history and archaeology. In a 1959 letter to his colleagues, South wrote, "[W]e historic sites archaeologists are often looked upon by our fellow anthropologists as a kind of bastard researcher—half archaeologist and half historian.... We will always remain a breed apart from our colleagues work on the American Indian. As a result ... we are not represented in the programs

of existing archaeological conferences” (South 2005:112).

SHA was formed to address this need, to provide a forum for presentations, publications, research, and information exchange on sites of the historic period. Conference attendance and membership in the early years was limited, as the field retained its emphasis on sites related to early American history. South himself would leave his post with North Carolina State Parks to join the South Carolina Institute of Archaeology and Anthropology and direct excavations at Charlestowne Landing, the first location of English settlement in the Carolina colony and a site that the South Carolina Parks Commission wished excavated and interpreted for the South Carolina Tricentennial in 1970. Other archaeologists would work on comparable historic sites with similar objectives to recover information about significant historic places that would lend to their public interpretation. Edward Larrabee would excavate the Fortress of Louisbourg in Nova Scotia for Parks Canada, and John Cotter, J. C. Harrington, and others’ work at Jamestown and Williamsburg highlight these efforts.

Had historical archaeology remained the study of major early historic sites with potential as public parks, SHA would have been a significantly different organization, with much smaller membership and annual meetings, since the number of major early historic sites is itself limited. Had this emphasis persisted, SHA might have even been absorbed by other archaeological societies, as recognition and acceptance of historical archaeology increased over time; this is what happened to South’s Conference on Historic Sites Archaeology, which was ultimately subsumed by SEAC. But SHA’s formation coincided with another event and took place in a time when historical research was changing focus. Both would change the nature of our society.

In 1966 the National Historic Preservation Act (NHPA) (16 U.S.C. 470) was passed. The NHPA stated that:

Congress finds and declares that –

- (1) *the spirit and direction of the Nation are founded up and reflected in its historic heritage;*
- (2) *the historical and cultural foundations of the Nation should be preserved as a living part of our community life and development in order to give a sense of orientation to the American people;*
- (3) *historic properties significant to the Nation’s heritage are being lost or substantially altered, often inadvertently, with increasing frequency;*
- (4) *the preservation of this irreplaceable heritage is on the public interest so that its vital legacy of cultural, educational, aesthetic, inspirational, economic, and energy benefits will be maintained and enriched for future generations of Americans;*
- (5) *in the face of ever-increasing extensions of urban centers, highways, and residential, commercial, and industrial developments, the present governmental and nongovernmental historic preservation programs and activities are inadequate to insure future generations a genuine opportunity to appreciate and enjoy the rich*



The image shows a blue banner for Heritage Business International, L3C. On the left is a logo with a stylized 'H' in a circle followed by 'biz' in green. To the right of the logo, the text 'Heritage Business International, L3C' is written in white. Below this, in white text, is the statement 'Providing heritage-specific business resources to CRM firms.' followed by a bulleted list: 'Employee business training', 'CRM industry data', and 'Organizational capacity building'. At the bottom left of the banner, it says 'A social enterprise venture dedicated to strengthening the CRM industry.' and '(415) 466-2980 | heritagebusiness.org'. On the right side of the banner is a white graphic of a stylized arch or bridge.

heritage of our Nation;

- (6) *the increased knowledge of our historic resources, the establishment of better means of identifying and administering them, and the encouragement of their preservation will improve the planning and execution of federal and federally assisted projects and will assist economic growth and development; and*
- (7) *although the major burdens of historic preservation have been borne and major efforts initiated by private agencies and individuals, and both should continue to play a vital role, it is nevertheless necessary and appropriate for the Federal Government to accelerate its historic preservation programs and activities, to give maximum encouragement to agencies and individuals undertaking preservation by private means, and to assist State and local governments and the National Trust for Historic Preservation in the United States to expand and accelerate their historic preservation programs and activities.*

The NHPA spoke directly to the work of North American historical archaeologists, emphasizing the role and importance of historic sites and the value of national heritage. Most significantly, the NHPA’s Section 106 and Section 110 legislated, respectively, archaeological survey for new federal construction, for projects on federal land, and for federally permitted projects, as well as the inventory of resources on federal installations. The cultural resource management (CRM) industry developed in response. While there had been a handful of archaeologists employed by businesses prior to the NHPA, in the years after, engineering firms added archaeologists to their payrolls, universities developed or expanded the scope and staff of their consulting arms, and private businesses were established to provide cultural resource services. We can see this transition in the careers of SHA’s founders; Ed Larrabee, who had worked for the NPS and Parks Canada, established the consulting firm Historic Sites Research in Princeton, New Jersey, in 1975. As a result of CRM, the number of professional archaeologists dramatically increased, this new wave of archaeologists included those interested in the historic period, and SHA’s membership and conferences expanded as well.

The NHPA leveled the playing field between prehistoric and historical archaeology since it did not discriminate in

significance assessments between the two. These effects were not immediate, however, as the majority of archaeologists leading surveys in the first decades of the NHPA were trained as prehistorians. I came into the field in 1976, which was the U.S. bicentennial and another push for history, and can recall being told by the archaeologist leading a survey project that the only historic sites we were to record were those with aboveground architecture (chimney falls, etc.), since the rest were not considered by him to be eligible for the National Register and therefore did not require documentation. It would take time for federal agencies to obtain qualified archaeologists capable of project scoping and review, and for State Historic Preservation Offices to obtain and train staff, and it would take time for academic programs and publications on historical archaeology to develop. The prevalence of prehistoric archaeologists led to a give-and-take from state to state on how historic sites were treated, a give-and-take that lasted into the 1980s. Interestingly, we are currently seeing similar trends and debate in some western U.S. states, prompted by the use of the 50-year mark as the definition of “historic” and coupled with the expansion of sites and material culture in the post-World War II era and mid-20th century. How we grapple with mid-century sites will be one of our challenges for the future.

The second trend that shaped our discipline emerged out of the Civil Rights Movement of the 1960s and the development of a new social history that focused on the lives of those largely ignored by the historical record. As social historians explored the lives of African Americans, Asian Americans, Hispanic Americans, and the working class, historical archaeologists, including those in CRM, recognized that the sites they were encountering could contribute to this dialog. The recognition of colonoware as a handmade earthenware made by African Americans on southern plantations exemplifies the ways in which CRM archaeologists contributed to archaeological research and the recognition and recovery of African American heritage. Leland Ferguson would present his classic paper, “Looking for the ‘Afro’ in Colono-Indian Pottery,” at the 1978 Conference on Historic Sites Archaeology and CRM studies would follow on its heels, providing further evidence in support of Ferguson’s analysis. CRM studies of colonoware would include work at Limerick Plantation and Spiers Landing and articles published in *Historical Archaeology* by Lees and Kimery-Lees in 1979 and Drucker

in 1981, respectively, as well as Wheaton and Garrow’s CRM work at Yaughan and Curriboo plantations in 1983. With CRM, historical archaeology’s emphasis shifted from early historic sites to a more broad-based discipline that examined the disenfranchised in multiple contexts, including the archaeology of gender, as well as industrial sites, nautical sites, cemeteries, battlefields, and urban centers, all while not forgetting the forts, early settlements, and big houses that were the subjects of the founders.

Today’s SHA is dramatically different than the society formed in 1967. While there were 14 individuals when SHA was founded, today we have 2,009 members, including 1,020 Regular members, 50 Adjunct members, 303 Student members, 156 Retired members, 116 New Professional members, 301 Institution members, 47 Life members, 9 Friends, 6 Developers, and 1 Benefactor. Our membership numbers highlight the growth of the discipline as seen in the number of Student and New Professional members, who represent a quarter of our non-Institution members. Career opportunities for historical archaeologists are much greater, with SHA members listing academic positions; CRM; federal, state, local, and tribal governments; K-12 education; foundations; and museums as their places of employment. And, as a true measure of the maturation of our society, 156 members list themselves as retired.

Today’s SHA represents a robust global discipline providing perspectives on an encyclopedic range of sites and subjects, and utilizing the latest in technology to conduct our work far more cost and time efficiently than our founders were able. Our annual meetings draw 1,000 attendees on average, and our venues are spread throughout the U.S. and Canada; this includes past overseas locations in the U.K. and a future conference in Lisbon, Portugal in 2021. Historical archaeology is the first global archaeology and our publication platforms and partners are adapting to take advantage of historical archaeology’s reach.

The next 50 years hold great promise. And the next four years will present challenges. I look forward to conversations with all of you in Fort Worth on the past, present, and future of SHA. Stay tuned for the next column and perspectives on SHA’s future and the next administration.

Reference

South, Stanley A.

2005 *An Archaeological Evolution*. Springer, New York, NY. 📖

SHA 2018
New Orleans, Louisiana
January 3-7
New Orleans Marriott
Start planning now!



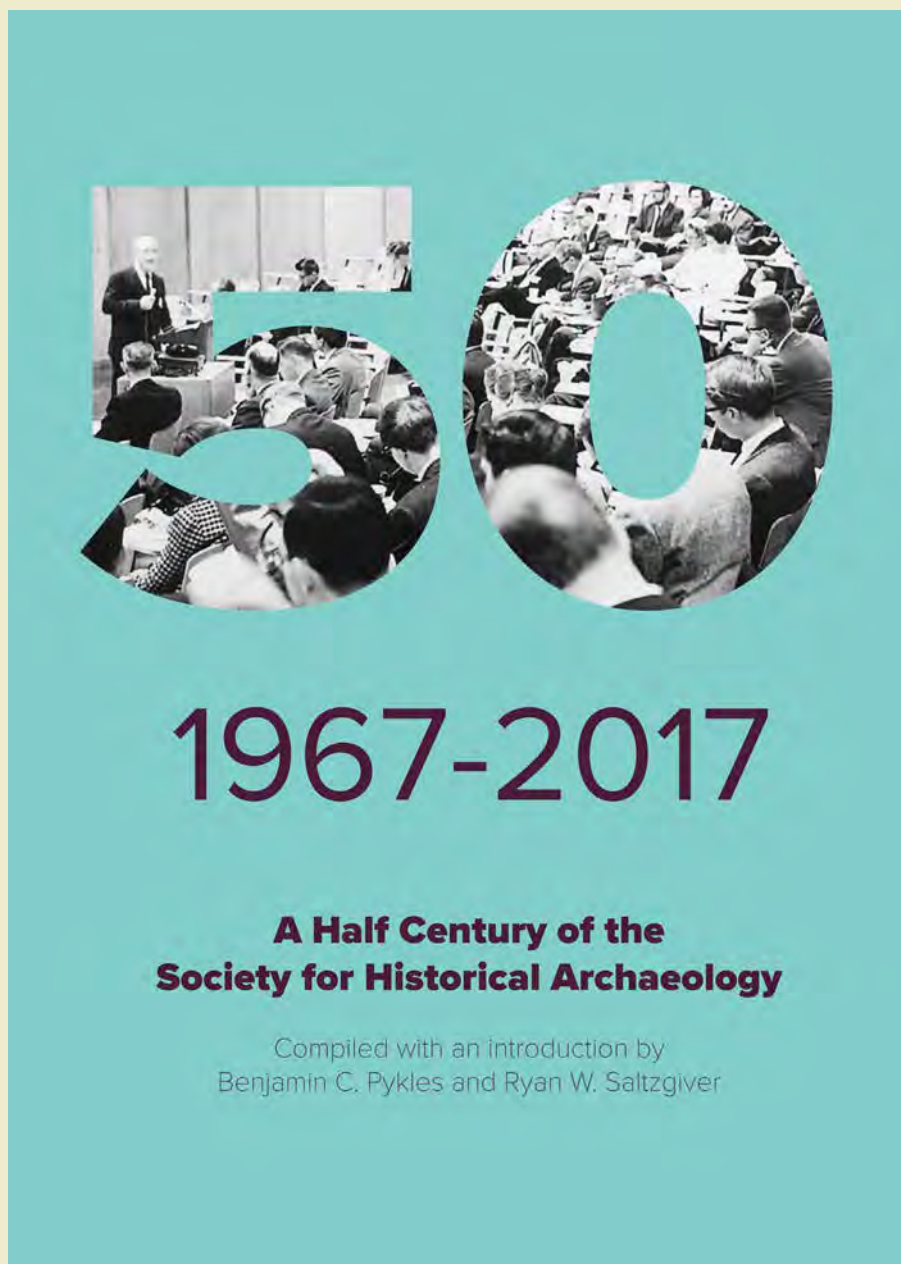
Images of the Past

Benjamin Pykles

A Half Century of the Society for Historical Archaeology

In January 2017 we will be celebrating the 50th anniversary of SHA. In honor of this special milestone, the SHA History Committee has prepared a special volume to commemorate the society's first fifty years. The volume compiles all oral history interviews, Harrington Medal and Ruppe Award articles, and memorials previously published in the journal *Historical Archaeology* since its first issue in 1967. These pieces document the lives and careers of some of the most prominent and influential figures in the development of historical archaeology and the rise and growth of SHA over the last fifty years.

This special commemorative volume has been available for sale since the January 2017 conference in Ft. Worth, Texas. Please join with us in celebrating this significant occasion by purchasing a copy for your personal or institutional library. All proceeds will benefit SHA as it looks forward to the next fifty years. Thank you, and see you in Texas! 🇺🇸



Death Notice

Florence Cline Lister (1920–2016)

(Donna Seifert)

Florence Cline Lister, best known to historical archaeologists for her work on ceramics of the Spanish traditions in the New World, died on 4 September 2016 at her home in Mancos, Colorado.

Florence was born on 29 April 1920 in Twin Falls, Idaho, to Mary and Paul Cline and spent most of her childhood in California. She was lured into archaeology by her father, who told a tale of finding a corrugated earthenware jar in an ancient ruin near Silver City, New Mexico. The story of that pot stuck with Florence. She spent the summer of 1937 visiting museums. At one, she came across a copy of *Archaeology* magazine, where she spotted an ad for a free correspondence course in archaeology offered by the University of New Mexico. Florence signed on.

Florence had completed two years of college in California when she transferred to UNM in 1937. She liked archaeology, but she observed that it seemed to be a man's field. The only woman around to consult was Florence Hawley, the sole woman on the department's faculty. Dr. Hawley suggested she find a niche that did not appeal to men and make that her specialty. Florence writes in her memoir *Pot Luck* that thus began her "lifelong love-hate relationship with potsherds" (1997:5). She also admits that Dr. Hawley suggested that her best bet would be to marry an archaeologist. Florence followed that advice, as well.

Three years after hearing the tale of the pot, Florence joined the UNM field school at Chaco Canyon, New Mexico. She met Bob Lister, an NPS Ranger, at Chaco. During the last semester of her senior year (spring 1941), Florence was courted by Bob: he proposed and she accepted. In 1942, just after Bob was commissioned as an army officer, they were married. They spent the first year of marriage at military posts; then Bob was sent to Europe for the rest of the war, and Florence returned to California to work as a translator for the Office of Censorship.

In 1945, Bob returned to a fellowship at Harvard, where he earned an M.A. in 1947. Ready to head west, Bob accepted a position at the University of Colorado, Boulder. By 1950, he had completed his Ph.D. at Harvard and returned to Boulder as an assistant professor. In 1952, the Lister family, including five-year-old Frank and two-year-old Gary, undertook the first of many field seasons. They started with a field school in western Colorado and then headed south to work in Chihuahua. A couple of years later, the family returned to Central Mexico for a year; then they went to a project in the state of Durango. Back in Colorado, Bob ran the field school at Mesa Verde (1952–1956) and later directed the Mesa Verde Research Center (1965–1970). Florence spent summer evenings at Mesa Verde analyzing ceramics and winter days in a basement lab in Boulder. The coauthored publication on the Earl H. Morris pottery collection (1969) and *Contributions to Mesa Verde Archaeology* (1964) are among the many that document her contributions to southwestern U.S. ceramic studies.

During the late 1950s, the Listers worked along the Colorado River in Utah, identifying and documenting archaeological sites that would be flooded by the Glen Canyon Dam. Florence took responsibility for all ceramics. For the first time, she was paid for her professional work, and her research results were published in several reports issued by the University of Utah (1959, 1960, 1961, and 1964).

The Glen Canyon experience positioned the Listers for work surveying archaeological sites to be flooded by the Aswan High Dam on the Nile River. Bob served as the administrative director for the Colorado group (1963–1964), and Florence analyzed more than 200,000 ceramic artifacts. To understand the wheel-turned, kiln-fired pottery she was analyzing, Florence began to learn the craft when she returned to Colorado. Her report was published in the *Anthropological Papers of the University of Utah* (1967).

In 1968, Florence and Bob were looking for a project they could work on together. Florence was interested in John Goggin's work on the tinglazed earthenware known as maiólíca (mayólíca or majolíca). She had known Goggin at UNM, and his maiólíca work had been orphaned by his death in 1963. Florence's experience with wheel-turned pottery on the Aswan project attracted her to the ware. The decision made, Florence and Bob decided how to share the work: he contacted institutions and handled logistics, drawings, and photography; Florence focused on literature research and the analysis of the pottery. She drafted text and he reviewed. Publications were coauthored. That's how they worked together for 17 years.

Their early work focused on Mexico, where they found little interest in colonial archaeology. However, subsequent excavations in Mexico City for the subway recovered masses of colonial ceramics—sitting in storage. Florence and Bob studied the mountains of sherds at a makeshift lab north of Mexico City. Florence and Bob later worked on colonial ceramics recovered during restoration under Mexico City's main cathedral. Through analyses of these collections, the Listers identified types produced by a 16th-century industry in Mexico City, predating the Puebla types found in the subway excavations.

In 1970, the Listers pursued their maiólíca project in Morocco. In Fez, Florence watched potters working at kick wheels positioned in pits so that the wheel heads were at ground level. Watching the work led Florence to propose

that the potters of Muslim Spain (Andalusia) must have worked this way. On a later visit to Granada, Florence spotted kick wheels just like those she had seen in Morocco—demonstrating the connection between the ceramic technologies of Andalusia and North Africa.

Research in Spain led them to Catalonia, the Levant, Castile, and Andalusia, where the port city of Seville had controlled the transatlantic trade for most of the colonial period. In Seville, Florence made a critical connection, matching bowls shown in an early-17th-century painting with bowls in a Seville collection, and yet more bowls from a Carthusian monastery in Jerez de la Frontera. The monastery vessels included bowls, plates, and jars—all identical to those in the painting. The monastery had been built in the late 15th century, and the ceramics were probably brought from the nearest urban production center—Seville. Adding this to what she already knew about the earliest New World types, Florence concluded that most earthenwares sent to the Spanish colonies were manufactured in Seville.

The Listers published several works reporting their research on ceramics of the Spanish traditions, including *A Descriptive Dictionary for 500 Years of Spanish-Tradition Ceramics* (1976), *Sixteenth-Century Maiolica Pottery in the Valley of Mexico* (1982), and *Andalusian Ceramics in Spain and New Spain* (1987), as well as numerous articles in *El Palacio* (1969, 1972, 1975) and *Historical Archaeology* (1974, 1976, 1978, 1981, 1984).

In 1988, the Listers built a house in Mancos, Colorado, within sight of Mesa Verde. Bob died suddenly in 1990, doing what he loved: hiking with friends to an archaeological site. Florence wrote in *Pot Luck* that “this would surely have been that archaeologist’s exit of choice” (1997:180).

Florence remained in their Mancos home, where she continued her work with the Crow Canyon Archaeological Center in nearby Cortez. She led many tours and programs and presented public talks to standing-room-only crowds. Crow Canyon honored Florence in 2004 with the Florence C. Lister Research Library and the 2014 Award of Honor. She continued her independent scholarship as well. In 1996, the Society for Historical Archaeology presented Florence with the society’s Award of Merit for contributions to the study of maiolica. At her request, the award certificate cited both Bob and Florence: as she said firmly, in the maiolica project, they were partners.

The Listers had received three research grants from The Museum of International Folk Art in Santa Fe, New Mexico, to study maiolica in Spain, Portugal, and Morocco (1968); in several production centers in Mexico (1970); and the Spanish and Mexican pieces in the museum’s own collection (1975). The book featuring the museum’s collection, *Maiolica Olé*, was published in 2002. That year, the museum opened a major exhibit on maiolica with a conference that presented leading experts from around the world. In addition to showcasing the most up-to-date scholarship in the field, the conference demonstrated to all that Florence was the undisputed leader of the field and that all had gathered in Santa Fe to honor her. Florence wrote the foreword for *Céramica y Cultura: The Story of Spanish and Mexican Maiolica* (2003), published the next year.

Florence’s memoir *Pot Luck: Adventures in Archaeology* was published in 1997. This delightful telling of her story has informed this remembrance. The book begins with her story of how archaeology snared her. Florence told that story again at her home in Mancos, Colorado, on 21 August 2016, near the end of her life. Here’s how she ended it on that day, talking about her life among pots: “I found that I really enjoyed the work, and maybe I had found some meaningful way in which to participate in a general archaeological problem, because pottery was gradually being shown to be of great importance in the interpretation of the particular site in which it was found.” Florence was a generous scholar, always happy to assist and support younger scholars. Thank you, Florence, for leading so many of us down that path.

Special thanks to Robin Farwell Gavin, William D. Lipe, and Mark D. Varian. Photo of Bob and Florence Lister, partners, courtesy of Elizabeth Hamilton.

A full Florence Lister bibliography will be posted on the SHA website.



Current Research

Please send summaries of your recent research to the appropriate geographical coordinator listed below. Please submit text as a Word file. **Submit illustrations as separate files** (.jpeg preferred, 300 dpi or greater resolution); **contact the relevant coordinator for guidelines on submitting video and audio files.**

AFRICA

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Vacant – contact the Newsletter editor for more information

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USA-MIDWEST (Illinois, Indiana, Michigan, Minnesota, Ohio, Wisconsin)

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USA-NORTHEAST (Connecticut, Maine, Massachusetts, New Hampshire, New York, Rhode Island, Vermont)

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CURRENT RESEARCH BEGINS ON NEXT PAGE

Canada - Atlantic

Newfoundland and Labrador

Double Mer Point, Labrador (submitted by Robyn Fleming and Lisa Rankin, Memorial University): The summer of 2016 saw the fourth year of excavation at Double Mer Point, located near the town of Rigolet on Hamilton Inlet, Labrador. The site was first recorded by William Fitzhugh in 1968 and

shovel tested by Richard Jordan in 1974. Starting in 2013 Dr. Lisa Rankin, Memorial University of Newfoundland (MUN), has overseen the testing and excavation of three Inuit semisubterranean communal winter houses dating from the late 18th century (Figure 1). This year was the second year of excavation associated with the SSHRC-funded research project, "Traditions and Transitions," which brings together academics and local communities in the discovery and interpretation of Inuit life along the Labrador coast. In addition, the project has brought together a number of students from various institutions, including Memorial University, Université Laval, and Concordia University, as participants in the excavations.

In 2016 excavation focused on investigating units located between Houses 1 and 2 and Houses 2 and 3. The purpose of this was to discover if any additional information could be gained regarding the sequence of construction of the dwellings. Eighteen units were excavated in total, with nine units being removed between Houses 1 and 2 and Houses 2 and 3, respectively. The units ranged in depth from 30 to 90 cm, with most units averaging a depth of 60 cm. Upon completion of the excavation a marked separation was noticeable between the construction dates of Houses 1 and 2 while Houses 2 and 3 exhibited some overlap. Scaled maps were drawn of both areas and are in the process of being digitized. Once this is completed we will have a clearer picture of the construction process. Both areas were rich in material culture with approximately 2,000 artifacts recovered. Traditional items, such as a partial *kudlik* (a traditional soapstone oil lamp used as a heat, light, and cooking source), whalebone harpoons with iron endblades, and an iron-and-bone composite knife (Figure 2) were unearthed, as well as an 1806 Britannia halfpenny, ceramic sherds, pipe fragments, trade beads, glass sherds, nails, a military button, and numerous unidentified metal



FIGURE 1. Aerial view of Sod Houses 1, 2, and 3 at Double Mer Point.



FIGURE 2. An iron endblade (top) and a composite knife with iron blade (bottom).



FIGURE 3. Copper-alloy closure.



FIGURE 4. Glass trade beads.



FIGURE 5. Whalebone trace buckle from a dogsled harness.

fragments. Evidence of previous occupations of the site was also identified in the form of lithic debitage, a Ramah chert core, a 4000-year-old Maritime Archaic gouge, and various partial and complete projectile points.

Artifacts recovered during the 2016 excavation form an assemblage similar to those recovered in previous excavations at the site. The majority of artifacts are housed at Memorial University, the exception being the House 1 artifacts, which are currently being analyzed by Laurence Pouliot at Université Laval. The 2016 collection is currently being cleaned and cataloged at Memorial University prior to in-depth analysis. Though the examination of this year's artifacts is ongoing, the completed excavations of the three Inuit sod houses will undoubtedly expand upon our understanding of the 18th-century Inuit occupation of Hamilton Inlet's shore.

Archaeology at Ferryland 2016 (submitted by Barry Gaulton, Catherine Hawkins, and Robyn Lacy): Our 25th consecutive field season was filled with exciting discoveries and new information on the lives of Ferryland's former residents.

The first area explored this summer was a terrace behind the Calvert-era stable and brewhouse. Investigations in 2015 uncovered a large amount of building material, including hundreds of roof-slate fragments, brick, and limestone, as well as window glass and turned lead. Datable artifacts placed the activities on this terrace within the first half of the 17th century. Excavations in 2016 revealed more of the same materials, but in smaller quantities. Given the proximity of the brewhouse and stable, and the date range of the associated artifacts, we tentatively interpreted this location as a work area associated with the intensive construction at Avalon in the 1620s.

However, this changed three weeks into the field season with the discovery of a lead bale seal stamped with the initials "IT" and a date of 1638 (Figure 1). Since the seal was not made until at least 1638 and therefore was not deposited at Ferryland until after that time, this provides a *terminus post quem* for the associated deposit. Our revised interpretation is that this terrace was an activity area associated with the dismantling/repurposing of many buildings at Ferryland to better suit David Kirke's plans for his Pool Plantation. Coincidentally, the date on the lead seal is the same year that the Kirke family arrived at Ferryland, displaced the Calvert-appointed residing governor, and took up residence in the Mansion House.

Fifteen meters west of the terrace excavations, the field crew continued exploring deposits at the bottom of the builder's trench directly behind the hall of Lord Baltimore's Mansion House. In the last several field seasons we have been adding to our knowledge of how this house was built as well as about the daily lives of those who built it. Fish, mammal, and bird bones tell us about the types and quantities of food that were consumed by the tradesmen working on the Mansion House, while the ceramic cooking pots demonstrate how it was prepared. Much to our surprise, we also found some interesting clothing-related artifacts in the builder's trench, including a tiny silver sequin and a button made of woven thread (Figure 2). The button is exceptional because the tiny threads are wrapped in silver. Neither embellishment would be expected on the clothing of a tradesman, but would not be out of place on that of the

individual who oversaw the construction: Governor Edward Wynne. If not Wynne's clothing, then perhaps these items once adorned the clothing of one of the other gentlemen or ladies who resided at Avalon during the mid-1620s, when the Mansion House was being built.

Amongst the fragments of roof slate, brick, and limestone in the builder's trench we also found substantial quantities of window glass, window came, turned lead, and many tiny cut lead strips. It was previously assumed that the windows set into the early buildings at Avalon were manufactured in England, carefully packaged, and shipped over for ease of construction. The pieces of thick, unfinished window came and tiny cut lead strips overturn this assumption—at least in the case of the Mansion House—because window came was fed through a small device called a milling vise to produce thin H-shaped turned lead, which was then trimmed and set with pieces of cut glass for the manufacture of windows. In the 17th century, all of these related tasks were the responsibility of a tradesman known as a glazier. Given the evidence above, it appears that one was present at Avalon during the construction of the Mansion House.

Next we turned our attention to the remains of a late-18th- to early-19th-century house built atop the filled and levelled remains of the much earlier (ca. 1620s) defensive ditch at the eastern perimeter of the settlement. Traces of this house were first discovered over a decade ago and will soon form an important component of graduate student Duncan Williams' M.A. research at Memorial University. In advance of Duncan's fieldwork next summer, the crew spent some time exposing the massive 12 ft. wide by 3 ft. deep fireplace and excavating a 1 x 4 m trench in the house's associated midden (Figure 3). The quantity and diversity of objects discarded by the occupants of this former dwelling are nothing short of fantastic.

Thousands of artifacts were uncovered, including dozens of fishhooks, several iron padlocks, dozens of buttons (bone and copper), sewing-related implements (e.g.,

a darning needle, straight pins, and thimbles), a ceramic doll fragment, and hundreds of cod bones. Wine and liquor bottle fragments were also well represented, as were clay tobacco pipes. Ceramic fragments include every ware type that archaeologists could hope to find on late-18th- and 19th-century sites in North America, including Westerwald and Rhenish brown stoneware, Staffordshire slipware, English stoneware and porcelain, and an assortment of handpainted and transfer-printed creamware and pearlware, as well as various whitewares. Of particular note are several transfer-printed plates that were broken but subsequently repaired by drilling a series of mend holes on each side of the break

from both the front and back. This technique of drilling holes from the front and back of a ceramic vessel—thus producing a small mend hole that is hourglass shaped in cross section—has been recorded at other 19th-century sites on the Avalon Peninsula, as well as in Labrador.

At least one of the occupants of this house was also literate, as demonstrated by a writing slate, slate pencil, and a large brass seal fob. The bottom of the fob bears an image of Atlas holding the universe on his shoulders and can be seen on similar seals from the 19th century (Figure 4). Based on artifacts found in the fireplace and associated midden, this house was occupied into the late 1800s.

During the 2016 field season we also conducted some test pitting at the far eastern

end of the site in advance of proposed construction for a new road to access the inner harbor. The results showed little in the way of cultural resources that would be impacted if a new road was built. Only two test pits revealed a 17th-century occupation layer and both were located south of the potential road corridor. Each of these 50 x 50 cm pits was expanded into a 1 x 1 m unit and produced enough artifacts and structural remains to justify further excavation.

The first area revealed a stone hearth measuring 6 x 7 ft. (Figure 5). Hundreds of nails were found in a burn layer directly above and north of the feature, suggesting an associated wooden structure that was destroyed by



Slideshow of Ferryland figures (slideshow only available in digital edition).

fire. Compared to other 17th-century fireplaces found at Ferryland, this one features much simpler construction and contained few domestic artifacts beyond scattered pieces of coarse earthenware, clay tobacco pipes, and bottle glass dating from the late 17th century. An iron claw hammer was the only tool of note. However, it is worth mentioning that the western end of this hearth is just 2 meters east of the stone-lined well found in Area D in 1994. At the time of the 1994 well excavation, a burn layer was also recorded and in it were parts of a burnt fish net and a collection of carbonized peas. Our preliminary interpretation of this new hearth feature is that of a living quarters for migratory fishing servants, possibly hired by the planter who lived in the nearby house in Area D. All of these buildings were razed during the French attack on Ferryland in 1696.

The second interesting occupation layer revealed through this year's test pitting is located between the stone-lined well and our reproduction kitchen garden. Below the uppermost layer of mixed plowzone was a dense deposit of angular stone rubble containing artifacts from the second half of the 17th century, including what appears to be two shattered but complete case bottles. Underneath is another layer containing large angular wall rocks and many complete roof slates, the appearance of which suggests a building collapse (Figure 6). To date, only structures built during the Calvert era were roofed in slate, whereas the Kirkes and later residents preferred wood to cover their buildings. If this is in fact a building with a slate roof, then it is the only such structure found outside the original 4-acre settlement. Determining the exact age and function of this potential building will require further excavation.

An important component of the 2016 fieldwork at Ferryland involved the search for the 17th-century burial ground. This was part of Robyn Lacy's M.A. research at Memorial University. Prior to fieldwork, Robyn examined the spatial relationships between burial grounds and their associated settlements in both Newfoundland and the eastern U.S. The survey encompassed 43 early colonial settlements and the subsequent statistical analysis provided frequency information on the positioning of burial grounds in settlements with similar characteristics. This information was applied to the Ferryland site in a systematic attempt to locate the burial ground associated with the 17th-century settlement. Guided by results of the statistical frequency model, a 6-week excavation was planned to investigate previously unexcavated areas directly south and east of the original 4-acre plantation, as these locations were statistically the most likely areas for the burial ground if it was situated outside of the fortifications. The team was made up of archaeology students, community members, and volunteers from other disciplines with an interest in the research. Before excavations began, Robyn, Maria Lear (Archaeological Curator, MUN) and several volunteers conducted a ground-penetrating radar survey of four high-potential areas (Figure 7). Several anomalous features were noted and test trenches were planned using the GPR results as a guide. The trenches were all dug in a north-south orientation, to increase the likelihood of crosscutting a grave

shaft, which generally runs east to west in the Christian tradition.

During the first week of excavation a number of 17th-century artifacts were uncovered in the first trench, including two intact pipe bowls just above a large posthole and post mold still visible in the glacial subsoil. In the second trench, two features that appeared to be candidates for grave shafts were identified in a clay deposit. Unfortunately, upon digging further we encountered an antifreeze bottle at approximately 95 cm below surface, indicating that these features were a modern disturbance. These two trenches were dug between the kitchen garden and defensive ditch, overturning the popular idea that the burial ground was located in that area.

During the second and third weeks, excavation took place on the hill to the south of the settlement. The first trench was located at the terrace edge directly west of the bastion earthwork. By 90 cm db, though neither graves nor subsoil had been encountered, the area started to become interesting for other reasons. Along the trench walls on the north end, nearest to the hill slope, layers of black organic material were visible in the profile. These were identified as decomposed sod layers, and it was determined that the trench positively identified the southern defensive ditch and associated earthen rampart, the exact location of which was previously unknown (Figure 8). This also meant that the entire crest of the landform should be devoid of graves. In the ditch backfill, however, an inscribed stone was recovered by Tiffany Brazil, a MUN student volunteer, which could be a portion of a gravestone.

In the fourth week, several 50 cm wide trenches were opened up to the southeast of the kitchen garden, where we found a 10 cm thick layer of shattered slate fragments, possibly indicating a potential slate-working area. This deposit is likely associated with the building collapse and scattering of roof slates noted above, just 4 meters away. Completing those trenches at the beginning of week five, we moved up the hill, south and southeast of the stone-lined well, to excavate a series of test pits in order to check the depth of subsoil before a backhoe arrived. During these tests, an intact 17th-century midden deposit was discovered on the Downs, yielding clay tobacco pipes, flint, bottle glass, and various coarse stoneware and earthenware fragments, including several pieces of decorative North Italian marbled slipware (Figure 9). This area will be further explored in 2017. At the end of week five, the backhoe arrived and eight trenches were dug in this area of the Downs and then troweled down to subsoil in week six. Although none of these trenches revealed human graves, the work came with the added bonus of locating a large 18th-century cellar that was previously unknown.

While the 2016 excavation did not identify the early-17th-century burial ground, Lacy and a team of volunteers will be returning to Ferryland for four weeks in the summer of 2017 in order to excavate a high-potential area inside the original 4-acre plantation, south of the brewhouse but close to where two gravestone fragments were found in previous field seasons. Due to time constraints this area was not

included in the 2016 season; it was moved to 2017 in order to allot adequate time for the recording of overlying natural and cultural deposits dating from the 18th century onward. According to data compiled for the statistical frequency model, it is equally likely that the early burial ground at Ferryland is located within the fortifications and near the center of the settlement.

The upcoming 2017 field season at Ferryland may prove to be our busiest and most exciting to date!

Nova Scotia

Albion Mines Foundry, Stellarton—Nova Scotia's Big Public Dig 2016 (submitted by Laura de Boer, *Industrial Heritage Nova Scotia*): On 10 and 11 September, 2016, Industrial Heritage Nova Scotia and the Nova Scotia Museum of Industry joined forces to host one of Nova Scotia's largest public archaeology digs to date. In total, 110 members of the public joined 7 professional archaeologists along with IHNS members and museum staff for a small taste of archaeological excavation (Figure 1). The Museum of Industry is located in Stellarton, near New Glasgow, Nova Scotia. The museum site is also part of the Nova Scotia Coal Fields (Stellarton) National Historic Site of Canada, designated here because it includes the remains of the Albion Mines complex, including a foundry that once provided specialized castings for the mine and for three early steam locomotives—Samson, Hercules, and John Buddle. Remarkably, the locomotive Samson has survived to the present day, and as Canada's oldest surviving locomotive, it is on display at the Museum of Industry. The Albion Mines foundry was established

sometime before 1830, perhaps as early as 1827. Its final day of operation is not known, but there is evidence that it was still in use in the 1870s and possibly later. The foundry is shown on historic mapping as an ever-changing complex of small buildings, reflecting changing needs for day-to-day activity and including a cupola and large casting floor, coke ovens, and most likely a separate building for the storage of (flammable) wooden patterns for molding in sand.

The foundry site was identified and partially excavated in the late 1980s and early 1990s by Helen Sheldon and colleagues. In total, 43 m² of units were opened and partially or fully excavated, revealing a wide assortment of metal artifacts related to casting and working iron, steel, and other metals, along with brick walls, floors, and a possible vent feature. The 2016 public excavation was planned and carried out as a continuation of these earlier digs, opening new units immediately to the west of the old in an effort to uncover more structural elements of the main foundry building. Furthermore, the new units were laid out with the intention of reopening four 2 x 2 m units that were opened for a middle school dig program in 1992 but were backfilled prior to completion. Unfortunately, the 2016 units did not overlap with the 1992 units—perhaps due to an error in earlier mapping or in my interpretation for laying out the units this year. Fortunately, this error did not impact the experiences of the diggers, who encountered artifact-rich soils directly below the sod.

Education was a key goal of the dig, with a view to not just teaching methodology but also local archaeological practices and legal frameworks. In teaching diggers how to excavate, I also emphasized that as the “lead archaeologist” I was the permit holder for the site, and that I held the responsibility of making certain the site was properly recorded and that

all artifacts were properly cataloged and brought to the museum. A common question from the public was whether a small piece of coal or slag could be taken home as a souvenir, as it was not being collected for cataloging. Participants were strongly discouraged from doing so, as this could promote private collecting when Nova Scotia legislation points to shared ownership by all Nova Scotians under the Crown's jurisdiction. Volunteer diggers at the site encompassed a broad range of ages and experience levels, from families with young children (Figure 2), to a teenage paleontology enthusiast, to adults interested in trying their



FIGURE 1. An excited child holds one of his finds.



FIGURE 2. A family learning how to dig.

hand at a long-time interest. Remarkably it was the “kiddie unit” on-site that became the deepest excavation; the youngest children were the most eager to dig deep and fast, and were very quick to learn how to identify iron, slag, and coal.

The most exciting find of the weekend was completely

technological trivia, but on the site of the Albion Mines it is particularly relevant: Samson, Canada’s oldest locomotive, likely rode on tracks like this, and perhaps rode on this very piece of track in the 1830s and 1840s.

Approximately 99% of all artifacts collected during the dig were iron, mostly cast iron but some wrought iron as well. Following the dig, the artifacts were sorted by priority level for conservation to remove the chlorides and stabilize the metal. Fragments that are not conserved will be photographed and reburied on the site at a future date. Some of the conserved artifacts may one day find their way into a Museum of Industry display beside Samson—a reuniting of rail and engine that no one could have expected had we not put shovels in the ground!

I’d like to repeat a huge thank-you to those who made the dig both possible and wonderful: archaeologists Courtney Glen, Vanessa Smith, Andrea Richardson, Allie Fraser, Adrian Morrison, and Cameron Milner; Museum of Industry Director Debra McNab and her amazing staff at the museum, including Erika, Jill, Jamie, and Scott; IHNS chair David Rollinson; and our IHNS Board of Directors. 🍷



FIGURE 3. Exposing a rail.

Canada - Québec

Life in the Trenches at Fort Saint-Jean: Results of the 2016 Université Laval Field School (submitted by Antoine Guérette, Sidy Ndour, and Stéphane Noël, *Département des Sciences Historique, Université Laval*; and Andrew R. Beaupré, *Department of Anthropology, College of William and Mary*): Between 4 July and 5 August 2016, six undergraduate and two graduate students from Université Laval undertook their first archaeological excavation through Laval's field school at Fort Saint-Jean, in Saint-Jean-sur-Richelieu, Québec. One of the main goals of the season was to locate remains or traces of the first French fort, built in 1666 by the Carignan-Salières Regiment. In 2013, Parks Canada archaeologist Maggy Bernier proposed a hypothetical location and orientation of the 1666 fort based on the discovery of a palisade trench. A partnership with Université Laval's Department of Geomatics provided a ground-penetrating radar (GPR) survey in the spring of 2016. By combining the GPR survey with the results of three mechanically dug trenches, it was possible to test the hypothesis concerning the location of the 1666 fort. After this initial phase, two units were strategically placed in promising areas of the site.

The American Invasion, 1775 (Unit 40G101L): This unit represents an extension of a mechanically excavated trench first opened to test the hypothetical location of the 1666 fort. The main goal of 40G101L was to document a deeply buried feature discovered in the southeast corner of the test trench. In 1775, during the American Revolutionary War, Fort Saint-Jean was besieged for 45 days, from 18 September to 3 November 1775, by soldiers of the Continental Army, led by Major General Richard Montgomery. The British 26th Regiment of Foot, the 7th Regiment of Foot, Canadian volunteers, and indigenous warriors formed the main force defending Fort Saint-Jean. The excavation of unit 101L revealed no structural remains, but it offered a wealth of artifacts and ecofacts. These objects can help us better understand the site's history and its occupants' lives during the American invasion.

One of the most interesting contexts excavated was a sheet midden that yielded a large number of objects. It contained an impressive amount of artifacts associated with firearms and other weapons, such as lead musket balls (.63 to .75 cal.), gunflints of both English and French origin, a complete musket hammer assembly, part of a musket trigger guard, an unexploded bomb, cast-iron grapeshot, and a scabbard finial (Figure 1). The vast majority of ceramic vessels recovered are creamware (1762–1820); other types include Jackfield-type earthenware (1740–1790), porcelain,

and tinglaze earthenware. With regard to personal and leisure items, a range of types of buttons were found in the midden, most notably two pewter buttons with "26" embossed in the middle (Figure 2). These were used by the soldiers of the 26th Regiment of Foot, a Scottish regiment of the British Army. Shoe buckles, fragments of smoking pipes, and wine bottles were also recovered. Preliminary analysis of the faunal material recovered indicates that the soldiers' diet was mainly composed of beef, and to a lesser extent, pork and mutton. Different kinds of cut marks are visible on the bones. The vertebrae were butchered down the midline and some were cut transversally with a heavy cleaver, which is indicative of the separation of carcasses in quarters. Additionally, a large proportion of the bones had cut and scrape marks made with a knife, which is the result of secondary processing or the consumption of cooked meat by the soldiers. The few bird bones recovered are those



FIGURE 1. Firearms-related artifacts, (1) musket-sling swivel, (2) musket trigger-guard fragment, (3) lead musket balls, (4) musket hammer assembly, and (5-6) English- and French-type gunflints.



FIGURE 2. Pewter buttons from the British 26th Regiment of Foot.

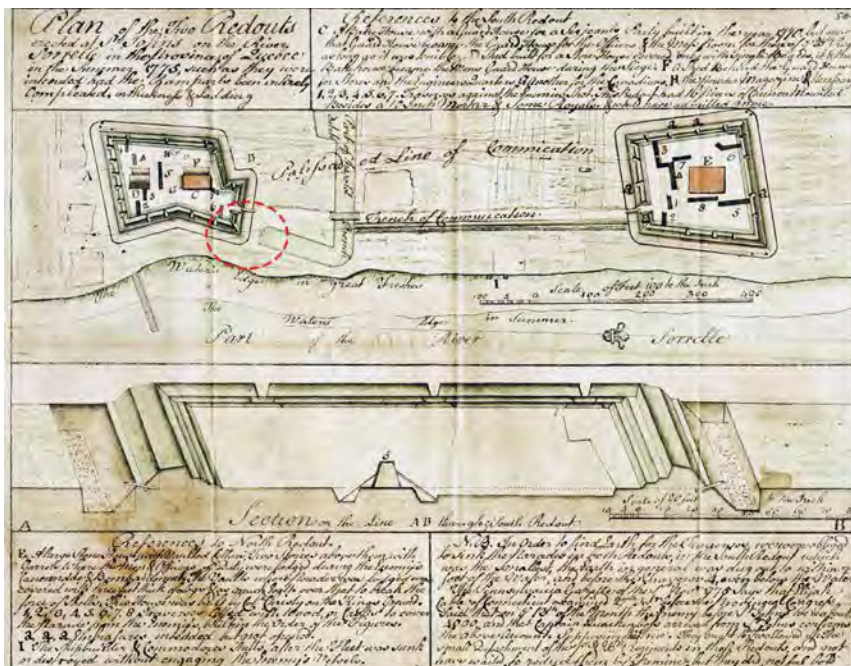


FIGURE 3. Plan of the two redoubts made in 1775 with the approximate location of unit 40G101L shown by the dotted red circle (upper left).

of ducks, ruffed grouse, and geese. Only a handful of fish bones were found, even though all the soil was screened using a fine mesh. The only identified species is from the catfish family (Ictaluridae).

The presence of varied military artifacts allows us to grasp the intensity of the battle between the British defenders and the American army. Our working hypothesis indicates that unit 101L is located near the southern redoubt entrance (Figure 3). On 1 November 1775 over a thousand cannonballs

and nearly sixty shells were launched at both redoubts, with the focus of fire being the south redoubt (Castonguay 1975:102). The presence of creamware sherds, but most importantly the complete absence of pearlware, which became common after 1780, suggests that this midden could have been formed between 1762 and 1780. This reinforces the hypothesis that this midden is associated with the period of the American invasion of 1775. The buttons of the British 26th Regiment of Foot provide another piece of circumstantial evidence; the soldiers of this regiment were the main defending forces of Fort Saint-Jean in the fall of 1775, along with the 7th Regiment of Foot.

According to written sources, the diet of the besieged consisted solely of the meat of cattle and pigs and some portions of bread (Castonguay 1975:100). The faunal analysis confirms the historical record, with the primary caloric intake being in the form of the meat of domesticated animals and with very little consumption of wild game and fish being attested.

Late-18th-Century British Occupation (Unit 40G101K): Although it did not detect any 17th-century remains, the GPR did clearly identify a rectangular anomaly similar to a building, which had been partially excavated in the 1980s (Figure 4). The objectives of unit 40G101K were to determine the building's function and, using historical records and maps, relate it to a specific occupation of the site.

The team excavated numerous 20th-century fill layers before encountering a level of furnace slag and ashes, assumed to be part of the pathway that connected the hospital, a few meters to the southeast, to the main barracks of the fort (ca. 1839–1950). A 19th-century occupation level covered 1 m thick masonry walls and a demolition layer. Inside the building, under the thick demolition rubble, the team excavated a burned layer and a number of clay levels containing mortar and wood chips. The burned layer is likely the charred remains of the building's wooden internal structure. This layer contained more than two hundred well-preserved forged nails, four cannonballs (3 and 4 pounders), a burned and melted coarse earthenware pot, melted glass, a broken shovel, and a typical mid-18th-century green glass bottle neck. Small animal bones, including those of rat and pigeon, were also present. Outside the building, at the bottom of a trench dug into the sterile soil, the team discovered the remains of a wooden drain. The drain was destroyed by the construction of the masonry building, indicating this feature predates it. Stratigraphically, it is possible to associate this drainage feature with the second French fort, which was built in 1748 and burned down in 1760.

This building (Figure 5) was partially excavated and interpreted in 1983 by Parks Canada Archaeologist

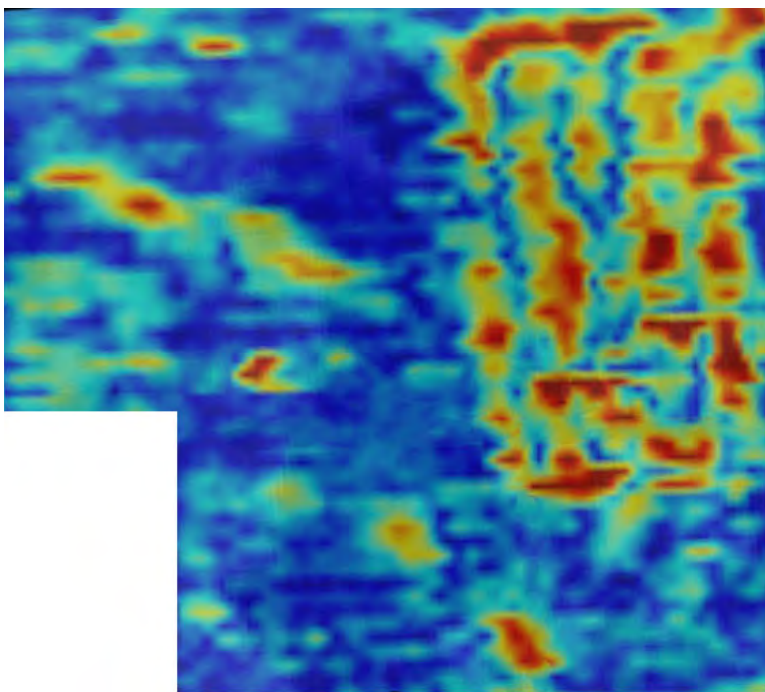


FIGURE 4. Processed data from the GPR survey made by the Department of Geomatics in the spring of 2016, showing the rectangular anomaly.



FIGURE 5. Plan view of 40G101K showing the southwest corner of the 1779 artillery storehouse.

Gisèle Piédalue as the Guard House built in 1770. However, thorough examination of the historical maps and material culture found inside the building has led our team to a different interpretation. On the 1779 plan of the fort, the location of the masonry feature examined in 2016 corresponds with that of an artillery storehouse built sometime after 1776. At some point prior to 1791 the storehouse was demolished, possibly being burned for an unknown reason. The presence of cannonballs and burned ceramics and glass paired with the absence of domestic objects support our interpretation of the feature as the artillery storehouse.

Conclusion: The 2016 Université Laval field school at Fort Saint-Jean allowed a number of students to experience their first archaeological excavation. A combination of different methods, including a GPR survey and partially mechanically excavated trenches, showed both the students and visitors the array of tools used in archaeological research. A detailed analysis of the material culture recovered is ongoing and will hopefully shed more light on the occupation of this area.

Acknowledgments: This project would not have been possible

without the initiative and support of the Musée du Fort Saint-Jean, the Corporation du Fort Saint-Jean, and the Canadian Department of National Defence. We are especially grateful to Éric Ruel, Vincent O'Neill, and Marijo Gauthier-Bérubé for their logistical assistance. We would also like to extend our thanks to the Department of Geomatics at Université Laval for offering us a great window into the past: Jean-Michel Lavoie, Alexandre Naud, Jonathan Fortin, Jacynthe Pouliot, and Richard Fortier. Finally, we would like to thank Réginald Auger, the director of the field school, for his guidance and support.

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Continental Europe

Belgium

The Zeebrugge-Wreck: An Early-16th-Century Merchantman from Belgium with a Cargo for the Americas? (submitted by Hendrik Lettany): In the early 1990s remnants of an old shipwreck and its cargo were discovered off the Belgian coast near the port of Zeebrugge. At this time the field of underwater archaeology was still in its infancy in Belgium, and no proper legislation was in place to deal with such a find. A group of divers and amateur archaeologists did come together to excavate the wreck nonetheless. Large numbers of objects, metal for the most part, were recovered from the site, as well as round shot and a few cannon. The results of this excavation, however, were never published in detailed form and the site has thus never been a subject of maritime archaeological scholarship. Now, about 25 years later, an attempt has been made to collect all available data from this excavation in order to propose a substantiated



FIGURE 1. Location of the Zeebrugge-wreck.

interpretation of what has become known as the Zeebrugge-wreck.

Bart Schiltz, a Belgian salvage worker, discovered the remains of a wreck close to the Vlakte van de Raan sandbank in September 1990. This was no coincidence. It was in this very same area that the *Anna Catharina*, a Dutch East India Company (Vereenigde Oostindische Compagnie, or VOC) ship, sank together with her sister ship 't *Vliegend Hert* in the night of 3 February 1735. In 1977, a map was discovered pointing out the likely location of both wrecks, and in 1981 't *Vliegend Hert* was discovered by Rex Cowan, a British lawyer. The excavation of this wreck went down in history as a much-criticized project and led to heated debates about the protection of underwater cultural heritage. The *Anna Catharina*, however, was never discovered and this motivated Schiltz to go on a quest for this wreck himself. After a long search, Schiltz finally discovered the remnants of a wreck based upon information provided by shrimpers. The artifacts he recovered during the first few dives convinced him that he had indeed discovered the wreck of the 18th-century *Anna Catharina*. Together with a group of professional divers, amateur archaeologists and historians, he initiated the excavation of the wreck. The project took four years. Soon, however, it became clear the artifacts were not associated with an 18th-century shipwreck—they had to be much older.

The underwater site did not present the structure of a ship as such. Rather, it was a large archaeological zone with scattered pieces of what once must have been a ship and its cargo. Adding to the difficulty of excavation were the conditions in the North Sea. Visibility was often close to zero and because of the strong currents excavation could only take place in the short periods between tides. In addition, completed work could be undone in a matter of a tide since large quantities of sediment were continuously covering and uncovering parts of the site. Nonetheless, large quantities of objects were recovered from the site. These consisted mainly of metal objects such as hundreds of brass candlesticks; numerous pieces of pewter ware such as spoons, plates, and salts; and brass and copper cauldrons, thimbles, nested



FIGURE 2. Some of the brass candlesticks recovered from the wreck. Several typological groups could be distinguished for both stems and bases, which were transported separately.



FIGURE 3. Nested cup weight marked with a clover. This mark was used from 1507 onwards by the Nuremberg weight maker Hans Gscheid.



FIGURE 4. Some of the thimbles recovered from the Zeebrugge-wreck. Two types of thimble could be distinguished.

weights, pins, and hook-and-eye fasteners. Although the excavation did produce an impressive collection of archaeological artifacts, it appears to have been carried out in a rather selective way with a preference for objects with aesthetic features. It is a shame that this bias resulted in an incomplete picture of the actual wreck site, but then again, there was no precedent or existing legal procedures

to follow at that time. Another consequence was that the excavation data ending up being dispersed, becoming the private property of several members of the excavation team. This is possibly the reason the data from the Zeebrugge-wreck have never been exhaustively studied and the site has never received the attention it deserved—until now.

For my master's research at the University of Southern Denmark, I have been collecting all available data from the excavation of the Zeebrugge-wreck. I have also meticulously recorded and studied the collection of recovered artifacts. The weaponry and the large quantities of similar types of objects indicate this was a heavily armed merchantman. The mark of a clover on several series of nested cup weights is likely associated with the Nuremberg weight maker Hans Gscheid, who achieved the rank of master in 1507. This mark provided the earliest *terminus post quem* for an artifact in the assemblage, indicating the ship sank in or after the year 1507. Typological features for other finds support this date and suggest the ship did probably not sink later than the first half of the 16th century. Among

the cargo we recovered objects from southern Germany, the southern Netherlands, England, and even some objects from the Portuguese overseas trade markets. Historical sources report that merchants from all these regions were key players in the rise of the port of Antwerp in the early 16th century. The Scheldt-estuary, close to where the wreck was discovered, was the gateway to and from Antwerp. Since some of the finds are also directly associated with the city of Antwerp, it seems reasonable to believe the Zeebrugge-wreck started on its last and fatal journey from this important 16th-century harbor. But where was it going?

The destination of the Zeebrugge-wreck is uncertain. Based upon the nature of the cargo and some known archaeological parallels, the Iberian Peninsula seems a reasonable candidate, yet other destinations are possible as well. Some years ago, however, another 16th-century wreck was discovered off the coast of the Dominican Republic. The cargo of this wreck in the Caribbean shows remarkable parallels with that of the Zeebrugge-wreck. Could it be the Zeebrugge-wreck's cargo, or at least part of it, was meant to reach the New World as well? Further comparative research with several other 16th-century wrecks is necessary to answer this question. Currently we are preparing a research proposal to continue this work at the Free University of Brussels in collaboration with several national and international partners. The study of the Zeebrugge-wreck has already revealed quite a bit about its cargo and provided insight into the history of this specific wreck. Hopefully, further research will reveal the larger trading network of which this ship was part, enabling us to know not just the past of the Zeebrugge-wreck but also the entire historical



FIGURE 5. A pewter salt from the Zeebrugge-wreck. The base features a stamped mark of a hand, a symbol associated with the city of Antwerp.

context to which it points.

Finland

Postmedieval Finnish Textiles: A Transatlantic Collaboration (submitted by Dr. Sanna Lipkin, University of Oulu, sanna.lipkin@gmail.com, and Erika Ruhl, SUNY at Buffalo, erikaruh@buffalo.edu): This project, the direct result of three years of transatlantic collaboration between Dr. Sanna Lipkin, a researcher at the University of Oulu, Finland, and Erika Ruhl, a Ph.D. Candidate at the State University of New York (SUNY) at Buffalo, centers on a number of burials beneath the floors of churches in northern Finland, dating



FIGURE 1. A silk flower in the hands of a girl at Haukipudas Church, Finland (the 18th century).

from between the 17th and 19th centuries. The burials, in Haukipudas, Keminmaa, Oulu, and Hailuoto, exhibit excellent preservation due to cold temperatures and dry, well-circulating air. Many of those buried are mummified, and the associated textile remains are in excellent condition. The first two churches are still standing, and have remained in continuous use for the most part. At the churches of Hailuoto and Oulu, in contrast, salvage excavations from 1980 through the 2000s have recovered material from more-traditional archaeological contexts. The project is part of the activities of the Church, Space, Memory-Project (<https://churchspacememoryproject.wordpress.com/>) led by Dr. Titta Kallio-Seppä at the University of Oulu.

The project's research questions address concepts of identity, with a particular focus on the cultural construction of children, childhood, and gender in the context of the relatively high child mortality rate during this period due to poor sanitation and disease. While many studies address childhood in mortuary contexts, this project seeks a deeper understanding of these burials, exploring the intersectional aspects of children and childhood identity represented by these remains. This project also addresses the impact of

children—and the loss of a child—on both the child's family and the community at large.

While these burials can incorporate hats, socks, gloves and caps worn by the deceased in life, the clothing items are almost always crafted specially for the burial. The deceased is covered by a half robe, not unlike a hospital gown, which is pinned to the coffin lining in a semblance of fashionable clothing. Unlike items worn by an individual in life, the burial robe was roughly sewn and pinned, being made from repurposed textiles. Evidence from Haukipudas indicates robe style differed for girls and boys, each following the fashions of their respective elders.

While caps, socks, and gowns appear across age and gender boundaries, children's burials are unique due to the presence of decorative silk flowers, held in the hands and formed into crowns. This practice evidently persisted longer for girls than for boys, in terms of age at death, with additional indications of sexual differentiation in their placement and quantity. Written sources suggest that girls' burials often represented them as brides, regardless of their ages at death. The information gained through this collaboration contributes to the wider discussion of the cultural conception of children and childhood, children's visibility in the archaeological record, the intersection of age with other aspects of identity, and children's roles as social actors within society.

The 2015 summer field season resulted in a coauthored paper presented at the 2016 SHA conference, "Mourning for Children in Northern Finland—Funerary Attire in the 17th-18th Century Contexts." The paper utilized textile analysis completed over the 2015 summer field season in tandem with historical documents, records, and practices to explore mourning for children in a time with high child mortality rates. Additionally, the 2016 field season has led to both an EAA paper ("A Stitch in Time: Use and Re-use of Funerary Textiles in pre-Modern Northern Finland") and a paper for the 2017 SHA conference ("Textiles—Decay and Preservation in Burials"). This material will also be utilized for Ms. Ruhl's Ph.D. dissertation. In addition to its theoretical contribution, this project has added significance for its potential to assist local churches in implementing plans to ensure the continued preservation of these burials.

Iceland

Heavy Metals: Health, Medical Tradition, and Cultural Exchange in Historic Iceland (submitted by Joe W. Walser III, the University of Iceland, jww2@hi.is, and Steinunn Kristjánsdóttir, National Museum of Iceland): Recent excavations at the ruins of the Augustinian monastery, Skriðuklaustur, which is in the east of Iceland and was active from A.D. 1494 to 1554, provided insights into the operation there of a hospital with sophisticated medical practitioners who provided a

variety of treatments. The skeletal remains recovered from Skriðuklaustur exhibited a vast array of medical conditions, including syphilis, tuberculosis, hydatidosis, and trauma. The specialized medical knowledge, surgical tools, nonlocal medicinal plants and herbs, and evidence of imported objects and food found at the site are indicative of Iceland's international cultural engagement in the past.

In the Middle Ages, mercury was often used as a treatment for syphilis and other venereal diseases, as well as leprosy. In addition, it served as a coloring agent, in the form of a red ink, for beauty products, paint, and scholarly writing and in the gilding of metallic objects. Significant exposure to mercury in the past occurred amongst alchemists, cinnabar miners, metalworkers, scholars, physicians, and the sick. As Skriðuklaustur was both a hospital and a monastery, the high mercury concentrations in human skeletal remains can be traced to exposure to environmental emissions, either natural or manmade (such as housing interiors); writing; marine food consumption; or to the receiving or administering of medicinal treatments, such as for syphilis.

The origins and movement of venereal syphilis remains a topic of ongoing debate; however, many scholars believe it appeared in Europe in the 15th century. Despite the 16th-century written accounts of barber surgeons coming to Iceland to treat individuals suffering from syphilitic infections, it was commonly believed that venereal syphilis was not found in Iceland until later times. In Iceland, the Skriðuklaustur monastery is the only excavated archaeological site where syphilis has been diagnosed from medieval skeletal remains; however, it is also the only archaeologically identified medieval monastic hospital in the country.

It was common for monks to act as physicians and prepare medicines based upon Galenic formulations, which were often composed of a mixture of herbs, minerals, metals, and animal parts. Monastic hospitals aimed to accommodate the changing needs of the societies in which they operated, which therefore required the development of treatments for the pathological conditions faced by their local communities. Due to the close ties of the Icelandic church with the Catholic Church on the European continent, a collective consciousness regarding shared ideas and practices prevailed. Similarly, during the 15th century German, Dutch, English, and Danish merchants dominated trade between Iceland and the continent and brought diseases with them. As monasteries were obliged to provide burial rites for all those who died within their care, it is clear that the deceased found at Skriðuklaustur could be a mixture of individuals from any level of the socioeconomic strata, including those of non-Icelandic origin.

In the 1500s, mercury became widely used throughout the world for medicinal treatments and in the process of amalgamation with low-grade silver ores. These uses played a significant part in the widespread marine contamination

by methyl mercury seen today. Medieval antisymphilitic treatment was ideally administered on a 1-year course by inhaling mercurial vapors and by rubbing a mercurial salve upon the lesions within a warmed, enclosed space. Some physicians also prescribed pills made primarily of mercury, mixed with other ingredients, such as honey, cinnamon, and senna. Aside from its highly toxic nature, mercury's inhibition of the immune system's ability to fight off disease may also counteract any benefits it may have. Regardless, it remained the most common treatment for syphilis until the arsenic compound, arsphenamine or Salvarsan, was introduced in 1909 and the first antibiotic, penicillin, was introduced in 1940.

The hydroxyapatite, the mineral-and-matrix component



FIGURE 1. *The Skriðuklaustur monastery site.*

of teeth and bone, retains mercury by replacing calcium and bonding with carbonates during life and therefore should not undergo extensive postmortem uptake, indicating that when abnormal concentrations are found in archaeological remains they may be correlated to antemortem exposure. A total of 50 individuals were analyzed in the course of this research using ICP-MS on well-preserved rib samples. The results of these analyses exhibited significantly elevated mercury concentrations in a number of individuals at Skriðuklaustur, including all those that exhibit skeletal lesions associated with syphilis. These elevated concentrations might be correlated with the administering or reception of mercurial treatments practiced at the monastery; however, antemortem environmental toxicity (e.g., exposure to volcanic eruptions) cannot be ruled out. For example, at the control site Skeljastaðir, a few individuals exhibited high mercury concentrations. High mercury emission was characteristic of the 1970 eruption at Hekla. Perhaps the Hekla eruption of 1104, which led to the permanent closure of the farm and the demise of the population living there, had a similar emission profile.

The use of sulfur and possible use of mercury at Skriðuklaustur as a medicinal treatment for syphilis, in



FIGURE 2. In situ human remains at the Skriðuklaustur site.



FIGURE 3. Skull from Skriðuklaustur showing lesions potentially associated with syphilis.

addition to other therapeutic devices such as surgical tools, medicinal herbs, and refined sulfur, indicates that Iceland was far from isolated in the past and on the contrary maintained a constant flow of communication through trade and monastic networks. This research hopes to contribute information about environmental and medico-cultural exposure to heavy metals, as well as to our understanding of the normal levels of these elements in the local environment. The ongoing analysis will investigate diagenesis by evaluating more soil samples from both sites. The various elements measured in this research, including lead, arsenic, mercury, cadmium, and fluoride, will also be considered within an environmental perspective by taking into account the effects of Iceland's volcanic and geothermal activity. Both sites are located near volcanic systems that are known to be significant heavy metal emitters and were both occupied around the times of serious volcanic eruptions. Another upcoming phase in this research will involve various isotopic studies to assess the diet and migration history of the individuals sampled from the two assemblages. ❧

Latin America

Chile

Historical Archaeology in Ollagüe—Mineros del Alto Cielo:

Francisco Rivera has directed fieldwork at Ollagüe, Chile, since 2012 as part of an interdisciplinary research project, "Mineros del Alto Cielo: Arqueología Histórica en Ollagüe." The project is investigating the late-19th- and 20th-century history of sulfur mining in the commune of Ollagüe (www.altocielo.cl). It has been funded by CONICYT-Programa Becas Chile and by the Social Sciences and Humanities Research Council-Vanier CGS, Canada. Informed by an archaeological, anthropological, architectural, and an historical approach, it seeks to preserve the area's valuable cultural heritage, both tangible and intangible. The commune of Ollagüe is located in the northeast corner of the Antofagasta Region, covering an area of 2,912 km² and at 3660 m.a.s.l. During the 20th century Ollagüe was challenged by the arrival of a modern economic model based on the exploitation of sulfur and borax mines. This marked a major turning point in the way of life and the social practices of the local community, because it transfigured social relations by absorbing the community into new capitalist forms of production and thereby transforming its social space and its materiality. The project has the aim of understanding this process of change in Ollagüe, its materiality, and the perception of this past by its inhabitants.

The end of the 19th century saw the initiation of the mining and industrial development of the northern regions of Chile. In the commune of Ollagüe, however, this change did not take hold intensively and permanently until the beginning of the 20th century, when the Antofagasta-

Bolivia railway was constructed and various mining centers emerged. In Chile, the process of modernization as expressed by the expansion of capitalism and industrialization had many economic and social impacts, which have been addressed by historians and anthropologists for the most part. Unfortunately, investigations of the mining history of this northern corner of the region and its influence on indigenous societies have not considered as axes of interest the multiple sites and the material culture related to sulfur exploitation. Hence, the modernization processes through which traditional societies were transformed and by which they integrated and absorbed new economic logics remain largely unexplored. Focusing on sulfur mining camps located in Ollagüe, this research project reveals the importance of modern materiality associated with the establishment, operation, and abandonment of mining facilities in northern Chile from the end of the 19th century and throughout the 20th.

The objectives of the project are to increase our knowledge of the mining expansion period in Ollagüe (1880–1980). First, it seeks to understand the origin and trajectory of the history related to the exploitation of sulfur in the commune, based on an analysis of the sociohistorical context and its industrial spaces and their materiality. Further, it considers the perceptions of the social actors involved in this process regarding its organizational and temporal dimension. Finally, the process of mining expansion and cultural change is analyzed through an interdisciplinary study of the main sulfur exploitation sites: Buenaventura, Amincha, Puquios, and Santa Cecilia, and their adjacent areas. Research to date suggests that the new capitalist economic order of the 19th and 20th centuries generated important changes in the social space and material culture in Ollagüe. Furthermore, the exploitation of the sulfur mines testifies to a complex cultural heritage, which would assume great importance in the development of memory and historical identity of the area's inhabitants. This heritage is composed not only of the material culture associated with the mining industry that can be observed today, but also of the experiences of its inhabitants and their families, as well as of other social actors, who have created forms of organization and social, cultural, and political expressions, many of which many persist into the present. The demodernization process, the industrial ruins, and the materiality of the recent past have generated memory spaces that are intertwined with the local indigenous community's contemporary preoccupations. On that basis, additional archaeological research has been proposed for the development of other areas of local interest, such as cultural tourism. 🏠

USA - Mid-Atlantic

Maryland

Historic St. Mary's City (submitted by Henry Miller)

New Archaeological Laboratory: The year 2016 marks the 50th anniversary of the creation of the state museum at the site of Maryland's founding and first capital. Fittingly, it is also the year the museum has taken possession of a new, \$14 million, custom-built archaeological laboratory, office, and curatorial building. It will permanently house the extensive collections acquired over the past half century of historical archaeology at the site, as well as materials from the earlier 1930s and 1940s investigations. Design was guided by the museum staff, led by curator Silas Hurry, and includes washing facilities, a large analysis area, a conservation laboratory, study collections room with compact shelving, offices, research library, and a large fully climate-controlled storage space, including a low-humidity room for metals. Design greatly benefited from advice and suggestions provided by archaeological conservator Lisa Young. The structure is adjacent to two new St. Mary's College of Maryland buildings. A new visitor center for the museum has been designed but has not yet been built next to the laboratory. It will allow visitors to view activities in the lab as part of their introductory experience to the site, thus emphasizing the archaeological basis for much of the museum. One of the college structures houses the anthropology and museum studies programs, and the spatial association of these buildings will be of much benefit to students. The collection of approximately 6 million artifacts was transferred to the new facility under the direction of Hurry in late August and September 2016.

Anne Arundel Site Mitigation: This new facility and the college structures are located where the 1955 Anne Arundel Hall classroom building stood prior to construction. This area was known to contain rich archaeological resources and preservation was strongly preferred, but political considerations dictated this location for new construction. Therefore, a major mitigation project was required to fully excavate the sites, some of which contribute to the National Historical Landmark. Supervised by Ruth Mitchell, this



FIGURE 1. Archaeological features from the Anne Arundel Hall fieldwork.

effort spanned much of 2011–2014 and recovered substantial Woodland-period occupations, a 17th-century ordinary, one of the principal streets of the 17th-century capital, and the core of the major 18th-century plantation at St. Mary's City. Construction of the 1950s building resulted in the removal of a large area of plowzone soils from the site and we anticipated much disturbance. After carefully planning and executing a demolition procedure for the classroom building that would not harm any surviving archaeology below, we found that nearly all the features were well-preserved. The building only had narrow foundation trenches with one limited zone of deeper intrusion. Among the features were massive postholes from several generations of earthfast structures and one cellar (Figure 1).

By working closely with the architects during design, another brick-lined 18th-century cellar and a zone containing the richest midden deposits were avoided and preserved. Cataloging of the artifacts is currently in process. When that is completed, analysis of the materials will provide a variety of potential thesis and dissertation opportunities for interested graduate students, with some funding available.

Figure 1 shows the brick-lined colonial-era cellar transected by the cinder-block foundation of the 1955 Anne Arundel Hall. The reason for the line of brick on the right side of the cellar floor remains unexplained.

Retirement of Chief Archaeologist Riordan: After long and distinguished service, Chief Archaeologist Timothy Riordan retired in mid-2015 and returned to his native Boston. After a search, Travis Parno was hired for the Chief Archaeologist position. Parno has a Ph.D. from Boston University in historical archaeology and has worked on a range of sites in the Eastern United States and in the Caribbean. His dissertation focused upon the 1641 Fairbanks House in Dedham, Massachusetts. Parno cotaught the 2016 historical archaeology field school, offered by the museum since 1971, with Ruth Mitchell and will manage the session in the future.

Lead Coffins: The three lead coffins found inside the 1660s Brick Chapel have returned to St. Mary's City after six years of exhibition at the Smithsonian Museum of Natural History and the Maryland Historical Society. They were placed in a burial vault inside the chapel last March in the precise location where they were discovered in 1990 and are visible under a glass floor. Study of the burials determined that one of the individuals was Philip Calvert, son of the first Lord Baltimore and a governor of Maryland, and another was Anne Wolseley Calvert, his first wife. A 6-month-old baby was also buried in lead and interred next to the others but its identity could not be established with the available evidence; nevertheless, some family association seemed likely. Figure 2 shows the three coffins both as uncovered in 1992, with the child's coffin on the left, and as they now appear in the new permanent exhibit. Analysis of materials from this project continues. A reanalysis of the pollen collected from each coffin was conducted by Gerald Kelso and Henry Miller and the report published as "Pollen Analysis of Three Seventeenth-Century Lead Coffins" in the



FIGURE 2. The Calvert coffins: as found (left) and in the new permanent exhibition (right).

Journal of Archaeological Science: Reports (6:160–169 [2016]). This conclusively demonstrates the value of palynology for determining the season of death and burial, which can be a vital clue in the identification of individuals. The study also gave insights about the location where the coffins were manufactured and stored, while a previously unrecognized pollen concentration indicates that Anne Wolseley was buried holding a bouquet of autumn flowers in her hands. An intensive chemical study of the well-preserved hair of Philip and Anne Calvert is currently underway to obtain insights regarding nutrition, medical treatments, and environmental factors during the last year of their lives.

And new developments in science have finally enabled the resolution of one of the lingering mysteries of the project—the identity of the baby. Harvard geneticist David Reich and his team have produced a new methodology that can extract both maternal and paternal DNA from archaeological remains. Paternal DNA was previously very difficult to collect from archaeological specimens. Douglas Owsley of the Smithsonian Institution recognized the potential of this methodology and, after consultation with Historic St. Mary's City, approached Reich about testing the Calvert remains. Reich agreed to do so and in September of 2016 he provided the results. There was a genetic paternal match between Philip Calvert and the baby, but their maternal DNA differed. Given their respective ages (55 years and 6 months), this strongly suggests a father-child relationship. Furthermore, the suggestion that the baby was female based on skeletal evidence was found to be wrong; genetics clearly shows the child was a male. This information makes it highly likely that the baby was the only child of the second marriage of Philip to a young woman named Jane Sewall. Pollen evidence and the age of the baby indicates he was born in late October or November and living at the time of Philip's sudden death on 14 January 1683. But the son did not survive long, succumbing to illness caused by vitamin deficiencies three to four months later. Details of this DNA study and news reports can be found at the HSMC website, www.hsmcdigshistory.org/mystery-baby, and the study with the genetic raw data at http://genetics.med.harvard.edu/reich/Reich_Lab/Datasets.html.

The Brome Slave Quarter: Among the hundreds of sites at St.

Mary's City are a number of quarters occupied by enslaved African Americans in the 18th and 19th centuries. The most intensively examined of these is a complex dating from the 1840s and associated with the Brome Plantation. Of the approximately 7 quarters which housed a 60-person community in 1860, 5 have been sampled, 1 tested more extensively, and 1 intensively excavated. These data are utilized in a doctoral dissertation by Terry Peterkin Brock entitled *"All of Us Would Walk Together": The Transition from Slavery to Freedom at St. Mary's City, Maryland* (2014, Department of Anthropology, Michigan State University). One of the original quarters, a rare central-chimney frame duplex, still survives. HSMC has secured funding and stabilized the structure. Based on Brock's scholarship, it is now converting his dissertation into a public exhibit about "Slavery and Emancipation" at St. Mary's City in the building, under the direction of Henry Miller with Brock's assistance. One room of the quarter will depict the era of slavery ca. 1850, and the second room will consider the consequences of emancipation ca. 1880. A shed added to the rear of the structure in the 1930s has been reconstructed. It will present the story of the last African American family to occupy the building, from ca. 1930 to 1965—the Milburns. This will include audio observations made by the Milburns's only daughter Emma, who grew up in the quarter. By integrating the archaeology, architecture, documents, and oral history, the museum will present a significant chapter in the area's history and address a previously neglected time period using an important original structure. It will also insure that Brock's dissertation work reaches a broad segment of the public. Some of Brock's findings are currently available at <http://hsmcwalktogether.org/>.

Dissertations: From the beginning, the HSMC museum has strived to make key findings of its research program available not just to scholars but to the public through presentations and exhibits. Two other recently completed doctoral studies on topics related to St. Mary's City continue this tradition, as does that by Brock. The home of the first governor Leonard Calvert and Maryland's first State House was the subject of an intensive analysis by Wesley Willoughby. Entitled *The Country's House: Examining Public Space and Community in St. Mary's City's Seventeenth Century Town Center* (2015, Department of Anthropology, Syracuse University), his study examines how the few public sites in the early Chesapeake region served as crucial loci of community interaction, political negotiation, and identity formation for the newly established colonial societies. Many of Willoughby's significant findings will become central parts of the upcoming Leonard Calvert House Exhibit to be built over the archaeological site, the planning and design for which is scheduled to begin in 2018. Another dissertation relates to the underwater heritage of the early colony. Scott Tucker conducted test excavations on a dense, elongated diamond-shaped ballast-stone deposit along the St. Mary's City shoreline in 2013. It appears to be associated with one of the 17th-century Tobacco Fleet vessels, which were vital to the economic system that connected the Tobacco Coast

to the English and continental European markets. Tucker has further explored this topic by examining the sailing routes recorded in original logbooks, vessel performance characteristics, etc. in *Smoke on the Water: An Historical Archaeological Assessment of Maritime Sources of Productivity Change in the Early English Tobacco Trade* (2016, Department of Archaeology, University of Southampton, UK). Miller has secured a grant from the National Society of Daughters of Founders and Patriots of America to convert portions of Tucker's dissertation into an exhibit in 2017 that will be located on the new dock of the museum's *Maryland Dove* tall ship and within sight of the 17th-century ballast deposit. It will become a part of the maritime education program attended by over 25,000 students each year, as well as by regular museum visitors.


Research Opportunities: The new facilities of Historic St. Mary's City, its rich archaeological collections, ongoing excavations, and documentary research archives provide many potential thesis or dissertation topics. Students are encouraged to develop projects that focus upon the recently retrieved and very large Anne Arundel Hall collection, which also has some funding available. Study will begin when the catalog process is completed in early 2018, although preliminary work could begin earlier. The Leonard Calvert House Exhibit project will also provide a number of research opportunities. In another initiative, a Maryland heritage group has agreed to fund, on an annual basis, an Ark and Dove Scholar: a graduate student or postdoctoral scholar will be given a financial stipend by the group and the HSMC museum will provide free housing, an office, access to the collections, lab equipment and research library, and analysis space for a period of up to 6 months. The scholar must focus upon a topic related to early Maryland in archaeology, architecture, or history, and will be selected through a competitive process that will be announced for the first time in January 2017. Interested parties should contact Henry Miller, Travis Parno, or Silas Hurry at the museum.

Maryland Archaeological Conservation Laboratory (submitted by Patricia Samford):

Recent Additions to the Diagnostic Artifacts in Maryland Website: The Maryland Archaeological Conservation Laboratory at Jefferson Patterson Park and Museum is pleased to announce that it has made a number of additions to its Diagnostic Artifacts in Maryland webpage. The most significant changes have been made to the section on porcelain. This section includes a much-expanded essay on and accompanying photographs of Chinese export porcelain, as well as new essays on bone china, English soft-paste porcelain, European hard-paste porcelain, and Japanese porcelain. These essays can be accessed at the following link: <http://www.jefpat.org/diagnostic/Porcelain/Index-Porcelain.html>.

Essays have also been expanded and additional photographs have been added in the following ceramic sections: North Devon coarseware, North Devon Sgraffito ware, and Border ware. A large number of additional photographs have been added to the painted wares, dipt

wares, and printed wares sections of the Postcolonial Ceramics page. And finally, George L. Miller has graciously allowed us to post a paper he prepared entitled “Common Standard Creamware Plate Patterns.” This paper can be found at the following link: <http://www.jefpat.org/diagnostic/Post-Colonial%20Ceramics/Cup%20Shapes/Common%20Creamware%20plate%20patterns.pdf>.

Outlander Exhibit Wins Award: Jefferson Patterson Park and Museum was selected as a 2016 Award of Merit winner by the Leadership in History awards committee for the project “Artifacts of Outlander: Connecting the Public to History and Archaeology Using Popular Culture.” The AASLH Leadership in History Awards is the nation’s most prestigious competition for recognition of achievement in state and local history. The “Artifacts of Outlander” exhibit opened in the park’s Visitor’s Center on April 25, 2015 and has since traveled to seven different venues, including the CNEHA meeting in Fredericksburg last fall. 

USA - Midwest

Midwest Historical Archaeology Conference (*submitted by Samantha Ellens, Ph.D. Student, Wayne State University*): The 12th Annual Midwest Historical Archaeology Conference (MHAC 12) was cohosted by Wayne State University and the University of Michigan (Ann Arbor and Dearborn) on September 23 and 24, 2016 in Detroit, Michigan. The conference theme was “Archaeology and the Power/Danger of Neighborhoods” and welcomed a variety of presentations across archaeology and related fields. Special thanks go to

Sue Alcock (University of Michigan - Ann Arbor), John Chenoweth (University of Michigan - Dearborn), and Krysta Ryzewski (Wayne State University) for organizing the conference.

Following an optional 3-hour guided bus tour of Detroit (Figure 1), which took place in the afternoon of Friday, September 23, the formal proceedings of the conference began with a plenary session at the University of Michigan’s Detroit Center. Plenary panelists included Dr. Dean Anderson (Michigan State Archaeologist), Lauren Hood (Acting Director of Live-6, Member of Preservation Detroit Board of Directors and Detroit’s Historic District Commission), and Dr. Andrew Newman (Assistant Professor of Anthropology, Wayne State University). This was followed by a catered welcome reception featuring music provided by Dr. Carleton Gholz (Executive Director, Detroit Sound Conservancy). The next morning, the conference convened in the Community Arts Building auditorium on Wayne State University’s campus to hear presentations given by participants at varied career stages and from varied perspectives on the subject of neighborhoods.

Over the course of the day-long proceedings, the audience was privy to engaging presentations conceptualizing neighborhoods as spaces of power, danger, politics, and revitalization through discussions of issues including economics, identity, heritage, ruination, and community archaeology initiatives. These incorporated a range of specific topics such as boarding schools, food politics, gendered spaces, and border culture. This year, the conference was comprised of posters and presentations consisting of brief 7-minute-long “lightning” talks accompanied by PowerPoints. This presentation style was a new format instituted in order to accommodate the forty-plus talks, which were organized within five

separate sessions, and to include time for discussion and audience involvement. In view of such a jam-packed schedule of exciting presentations, those unfortunate enough to run over the time limit were subtly notified by the crash of a gong in order to keep things on track. Following each session, the audience was offered the opportunity to ask the presenters questions and engage in further dialog on related themes.

The formal proceedings of the 12th annual conference came to a close with consideration of the future of the field through the engaging and thoughtful concluding remarks by this year’s discussant, Dr. Stephen Mrozowski, professor of anthropology and the director of the Fiske Memorial Center for Archaeological Research at the University of Massachusetts - Boston. The conference was a great success, thanks to such a diverse collection of perspectives, all connecting back to the theme of



FIGURE 1. Thomas Killion (Wayne State University) describes the history and archaeology of the Corktown Workers’ Row House to MHAC 12 tour participants. (Photo courtesy of Lynn Evans.)

neighborhoods, and to the support and participation of many offices and individuals, including those from the University of Michigan and Wayne State University, Preservation Detroit, the Detroit Experience Factory, and the Detroit Sound Conservancy. The 13th Annual Midwest Historical Archaeology Conference will be held at Purdue University in October 2017.

Michigan

Fort St. Joseph Archaeological Project: 2016 Field Season (submitted by Erika K. Loveland and Michael S. Nassaney, Western Michigan University): The Fort St. Joseph Archaeological Project resumed site investigations, public outreach, and education in July and August 2016 at Fort St. Joseph—an 18th-century French trading post in the western Great Lakes region. Western Michigan University (WMU), in collaboration with the City of Niles, hosted its 41st annual archaeological field school at the site, under the direction of Dr. Michael S. Nassaney. Survey and excavation were conducted in new and previously investigated areas of the floodplain in search of information on the nature and extent of 18th-century activities and associated architecture.

Eight Western Michigan University undergraduate students participated in this year's field school and four previous field school students returned as staff members. The 2016 staff included: Erika Loveland, Teaching Assistant; Austin George, Lab Coordinator and Site Photographer; Tim Bober, Public Education Instructor; Elizabeth Mantyck and Genevieve Perry, Public Outreach and Social Media Coordinators; and Gary Thompson, Field Assistant.

Previous excavations on the Lyne site terrace above the fort had yielded evidence of 18th-century activities. We conducted a geophysical and shovel test pit survey this year



FIGURE 2. This rectangular concrete feature was found in Locus 4 area this year. Note the decorative stones and small metal pipe entering the feature in the northwest corner. (Photo courtesy of Austin George.)

on the western edge of this landform, designated Locus 4, which is seasonally cut off from the mainland by floodwaters. Dr. William Sauk (Department of Geosciences, WMU) directed the magnetometer survey in hopes of identifying magnetic anomalies to guide future investigations. Seven magnetic anomalies were located that deserve future testing. All but two were near shovel test pits that yielded 18th-century and precontact cultural remains.

A total of 19 shovel test pits were excavated across a small portion of the Locus 4 area to identify activities that may be contemporaneous with the fort (Figure 1). Lead shot, a musket ball, and a ramrod guide were among the 18th-century artifacts found. Lithic flakes and low-fired earthenware were also recovered, providing evidence for precontact activities in this area. In addition, a rectangular concrete feature was located and designated as Feature 25. Decorative stones were placed along the top of its walls and a small metal pipe entered the feature in the northwest corner (Figure 2). Any suggestions regarding the function of Feature 25 would be appreciated.

The excavations on the floodplain where Fort St. Joseph (20BE23) has been identified dominated our field activities. Five 1 x 1 m units were excavated and four 1 x 2 m units were reopened in locations chosen for their high probability to provide information relating to site architecture, specifically building size, orientation, and construction methods. We encountered a foundation wall (Feature 26), a large stone fireplace (Feature 20), and a large bone midden (Feature 11), along with objects related



FIGURE 1. Field school students performing shovel test pit excavation in Locus 4 of the Lyne site (20BE10). (Photo courtesy of Austin George.)



FIGURE 3. This fireplace (Feature 20) was further explored this year to ascertain its size and orientation in relation to other features at the site. (Photo courtesy of Austin George.)

to the religious, domestic, and commercial functions of the site. Feature 26 consists of five structural stones (15 to 35 cm long) intentionally placed in a linear concentration running northwest to southeast. These structural stones appear similar to two other partial foundation walls (Features 17 and 24) associated with other buildings on the site. Four of these stones were unearthed last year, and excavations this year revealed a fifth structural stone on the north end of the feature. A large stone fireplace, Feature 20, was further explored this year to ascertain its size and orientation (Figure 3). Excavations revealed that the fireplace measures at least 2 x 1.2 m and consists of stones ranging in size

from 10 to 60 cm. The orientation was also revealed to be perpendicular to other fireplaces at the site. It is possible that this fireplace may be associated with the Feature 26 foundation wall, although more excavation is needed to determine their relationship. In addition, we defined the northern extent of a bone midden (Feature 11) (Figure 4). Its abrupt boundary and placement suggests it lies immediately south of House 2.

In addition to learning field and lab procedures, students participated in community service learning and public outreach activities by assisting and taking part in the project's public lecture series, the local farmer's market, and the Open House weekend. Daily blog and social media postings also provided students with the opportunity to connect with the public and report on findings, interpretations, and other events of interest to the community.

Many of the students are continuing their involvement with the project in the offseason by processing artifacts, presenting results to professional audiences, and disseminating information about the history and archaeology of the Fort to followers everywhere. If you would like to keep updated with the project, please like us on Facebook, follow our blog at fortstjosepharchaeology.blogspot.com, and search "fsjarchaeology" on Instagram! 📸

USA - Northeast

Connecticut

Recent Investigation of the 17th-Century Lt. John Hollister Site, Glastonbury (submitted by Brian D. Jones, Connecticut State Archaeologist): Lieutenant John Hollister arrived at the young settlement of Wethersfield, Connecticut, from a village near Bristol, England, in 1642. He married Johanna Treat (daughter of Richard Treat, a man of high social standing in the community) the same year and was admitted freeman in 1643. Preliminary genealogical research suggests that Hollister was a second son, thus unable to inherit his father's estate in England. However, he appears to have arrived in New England with ample capital, and according to Wethersfield land records, by 1655 had acquired 23 parcels of land totaling about 240 acres. Sixty acres of this land included a working farm located at Nayaug, on the east side of the Connecticut River. This farm was likely purchased prior to 1650 and included a house and outbuildings. Hollister's growing family already occupied a



FIGURE 4. Two students carefully excavating the Feature 11 bone midden in the southern portion of their unit. (Photo courtesy of Austin George.)



FIGURE 1. North Italian marbled slipware, John Hollister Site.



FIGURE 2. A mid-17th-century pipe bowl recovered from the base of the middle cellar, John Hollister site.

home in Wethersfield center, and records indicate that he let out the farm to the Gilberts (another West Country family) in 1651. The Gilberts worked the farm for Hollister until 1663. Josiah Gilbert's family included six children born during their occupancy, and his father and some of his brothers likely lived there as well.

Lieutenant Hollister died at a relatively young age in 1665. His lengthy probate lists assets valued in excess of £1600. His son John received "his house and barn, orchard and pasture" with "sixty acres of plowing and mowing with other land" in Nayaug, with the understanding that he would provide his mother with twenty bushels of apples and two barrels of cider a year. The probate also indicates that large quantities of both wheat (20 acres) and Indian corn (23 acres) were being grown on the farm. John married in 1667 and started his own large family at Nayaug. The farm was fortified with a palisade in 1675 to protect neighboring families and their farm products during King Philip's War. During this time, John also aided the local Wangunk tribe with the construction of a palisade on high ground just north of Nayaug. Toward the end of his life, John parceled off his lands to his sons, who began to raise their own families nearby. John Hollister died in 1711 and the house is believed to have fallen out of use by ca. 1715.

In 2015, the Glastonbury Historical Society and landowner Mark Packard, a Hollister descendant, approached the Connecticut Office of State Archaeology (OSA) to run a public excavation in the large horse pasture believed to be the location of the John Hollister farm. In preparation for this, OSA asked ground-penetrating radar expert Peter Leach, a UConn graduate student, to survey the area for features that might be worth investigating. That preliminary survey produced remarkable results—three large rectangular cellars were identified, as well as other probable outbuilding cellar features and a number of large pits or posts. A subsequent one-day Historical Society dig produced a small assemblage of artifacts that hinted this could be the location of the Hollister farm, so a more intensive follow-up study was scheduled for 2016.

The 2016 field season began with a magnetometry study of about three acres of the pasture surrounding the core site

area. This work was conducted by graduate students Maeve Herrick and Jasmine Saxon from the University of Denver. Herrick and Saxon followed this study with additional GPR work in July and August, expanding on Leach's original survey. Archaeological excavations were undertaken in August through public programs associated with the Connecticut State Museum of Natural History (UConn) and the Historical Society of Glastonbury. The excavation season focused primarily on the three main cellar features identified in the radar surveys. Portions of these cellars were excavated to their floors at a depth of about 150 cm. The cellar fill, passed through 1/8-inch hardware cloth, proved to have preserved very rich deposits of faunal remains, including both wild and domestic mammals, as well as turtle and fish (bones and scales) and abundant shellfish. Carbonized maize and bean were also identified during the excavation, and smaller botanical remains will likely be recovered from flotation samples.

Artifacts have yet to be inventoried, but included a large fragment of a North Italian marbled slipware bowl, decorated and plain delftware sherds from both hollow and flat wares, abundant clay pipe fragments from both red and white pipes (typically with 8/64-inch diameter stems), glass beads, a brass bell, a latten slip top spoon, Rhenish stoneware, and a variety of English slip-decorated and leadglazed earthenwares, including probable examples of Midlands blackware and yellow Border ware (Figures 1 and 2). Of particular significance was the recovery of fragments of a very large native-made storage vessel near the bottom of the central cellar. This item is a tangible reflection of the close relationship between the Hollister family and the local Wangunk people.

The site is arguably one of the state's most significant because of its age, richness, and lack of subsequent disturbance. In terms of material culture, it is perhaps most comparable to the Governor Sir William Phips Homestead in Woolwich, Maine, examined by Robert Bradley. Architecturally, the Hollister residence may prove to reflect a very long West-Country-style "cross-passage" house, but further work will be required to determine if the three aligned

cellars formed part of a single household structure or not. The site's mix of wild and domestic food remains, as well as the use of native-made pottery, also brings to mind Sylvester Manor at Shelter Island, Long Island, investigated by Stephen Mrozowski. Both of these sites represent similarly wealthy plantations and trade centers associated with important colonial families.

Analysis of the materials recovered from the site is just being organized now. A special session at the Society for Historical Archaeology conference is already being planned to present the results of the site analysis in 2018, so stay tuned.

Maine

Province Fort in Windham (*submitted by Leith Smith*): The Province Fort was constructed on Anderson hill, Windham, Maine in 1744 by the Province of Massachusetts to house a small garrison of soldiers for the purpose of protecting settlers of New Marblehead from Native American attack.



FIGURE 1. Rubble-stone foundation for south enclosure wall below road edge.

The fort was purported to consist of a palisaded 50 x 50 ft. blockhouse with opposing corner watch boxes. Phase II investigation in the fall of 2015 was prompted by Maine DOT plans to lower the busy thoroughfare of River Road to improve safety. This work determined the road was constructed directly on top of the 1744–1782 fort site. Phase III investigations for the 2016 season focused on identifying and exposing features on both sides of the road.

Work on the south side identified a rubble-stone foundation, 50 ft. in length, believed to have supported the fort's south log enclosure wall (Figure 1). Explorations beyond the foundation identified a series of discontinuous stone alignments, believed to have supported sleepers for an extensive plank walk present between the central enclosure and the outer palisade fence.

Work on the north side of the road identified a 5 x 12 ft. stone-and-brick-rubble chimney foundation that would have been within the central 50 x 50 ft. walled enclosure. Found outside the enclosure were a separate 5 x 5 ft. foundation for a chimney or bake oven; stone walls associated with later use of the fort as a church, school, and town hall; and a trash pit that may have functioned as a root cellar. Artifacts from various contexts include fragmented bottle glass, tobacco pipe fragments, bone, buttons, cufflinks, gun flints, lead shot, coins, Westerwald stoneware, Staffordshire slipware, white saltglazed stoneware, tinglaze earthenware, redware, creamware and pearlware. The 2017 season will focus on archaeological remains that lie under River Road associated with the central fort enclosure as well as outside. The presence of nearly a meter of fill over a portion of the site increases the likelihood that substantial portions of the fort remain intact under the road.

Massachusetts

Bartlett Rod Shop Dam Removal (*submitted by Suzanne G. Cherau, Public Archaeology Lab, Inc.*): The recently completed Bartlett Rod Shop Dam Removal portion of the Amethyst Brook Stream Restoration Project in Pelham, Massachusetts, is one of the increasingly common stream restoration projects occurring throughout New England that affect historical archaeological resources. The project serves as a model for the effective development and successful implementation by project partners, including the National Oceanic and Atmospheric Administration, Massachusetts Department of Ecological Restoration, Massachusetts Historical Commission, and Pelham Historical Commission. A team of industrial archaeologists and historians from The Public Archaeology Laboratory, Inc. (PAL) in Pawtucket, Rhode Island, conducted the archaeological monitoring and recordation of the Amethyst Brook Timber Dam in January 2016 (Figure 1). Research questions focused on the age, historical associations, and design of the structure. Amethyst Brook has a rich and well-documented history of industrial use dating to the mid-18th century, with multiple closely spaced privileges surrounding the Timber Dam site. Preliminary historical research of the structure yielded two hy-



FIGURE 1. General view of Timber Dam prior to excavation, looking northeast (upstream).

potheses for the origins of the dam: (1) the dam powered John Crawford's gristmill—the first in Pelham—active between 1739–1820, or (2) the dam was associated with a forge (later used for a fulling and carding mill) established by Jonathan Snow between 1772 and 1792 and active until 1820.

Dam removal activities extended from the south (river left) bank to the center of the active stream channel; the north (river right) bank and dam segment were not excavated. After removal of sediment overburden through a combination of machine and hand work, the Timber Dam was recorded with high-resolution digital photographs, measured drawings, written notes, Total Station survey, and GPS mapping. A portion of the timber cribbing and the abutment was preserved in place.

Current research revealed that the dam incorporated a combination of timber crib and frame dam elements, rather than relying exclusively on timber crib design as previously anticipated. This hybrid timber crib/timber frame design demonstrates that early dam construction in New England can vary widely in practice and underscores the value of archaeological survey of such structures.

The recorded portion of the dam measured approximately 55 ft. long (N-S) and 20 ft. wide with a 50 ft. long timber crib spillway and 5 ft. long stone-and-wood abutment (Figures 2 and 3). The dam spillway had a triangular cross-section with a 6.6 ft. high downstream face, 20 ft. wide base, and approximately 18 ft. wide angled upstream face, which was partially collapsed. The dam frame was assembled from tree boles saddle notched and pegged into cribbing. All of

the timbers were cut with axes and adzes, and no metal fasteners or hardware were found anywhere within the dam. The sloping upstream face of the spillway was sheathed in heavy pit-sawn planks, laid longitudinally, and pegged to the cribbing with 1-inch square treenails. Shallow carpenters' marks were preserved on the planks; the symbol "X" was used to indicate peg locations, and one plank was marked with a "⊙" symbol—a variation on the Roman numeral "I" often used as a framing mark. Additional tree boles were pegged longitudinally across the crest of the dam to serve as cap logs.

Only limited data concerning the internal structural configuration of the spillway and any spillway substructure could be recovered. Select transverse timbers in the lower courses of cribbing were squared off along their top faces and mortised, apparently to accommodate vertical bracing. Very few rocks were noted within the spillway cribbing—apparently the stone ballast that was often used in crib dams was not employed at the dam.

The stone-and-wood abutment was structurally integrated with the spillway. The core of the abutment was dry-stacked fieldstone and was flanked on two sides by the cribbing of the dam spillway. A vertical log projected from the top surface of the abutment and presumably served as a piling to anchor the structure horizontally. Vertical sheet piling of heavy planks was driven between the abutment and spillway to form a spillway training wall. No water control features such as gates, flumes, or canals were found; and no nonstructural cultural artifacts were recovered that could assist in dating the dam.



FIGURE 2. General view of fully excavated Timber Dam, south bank of brook looking northwest.



FIGURE 3. General view of fully excavated Timber Dam, north bank of brook looking southwest.

The dam's design implies that the contractor or millwright responsible for its construction had some knowledge of dam construction techniques, but the lack of a downstream apron for the spillway and use of raised cap logs indicate that the builder probably did not have a high level of experience. These deviations from established norms may have created ongoing maintenance issues, and the apparent subsidence or collapse of the timber dam—initially attributed to the overburden of sediment—may be due in part to scouring caused by a lack of a spillway apron.

The general design and configuration of the structure indicates that it was a run-of-the-river (weir) type structure typically used for small-scale milling and manufacturing in New England between the 17th and early 19th centuries. The dam's design and workmanship indicate that the structure was likely built between 1740 and 1820. Two elements were particularly noteworthy in this respect: the limited use of sawn lumber and the lack of metal fasteners. Sawmills were not established in Pelham or adjacent Amherst until 1740–1745, providing a strong beginning date for the possible period of construction of the dam.

Analysis of archaeological data recovered from the Timber Dam revealed that it almost certainly was associated with the Crawford or Snow mills and was built in the 18th century during Pelham's early industrial and economic development. The dam is an outstanding and well-preserved example of a timber crib dam—possibly the oldest-recorded intact timber dam in Massachusetts. Future archaeological investigation of the dam site, combined with additional archival research and wood species identification and dendrochronology, could more definitely pinpoint the Timber Dam's historical associations and construction date. 🏰

Sonoma Coast Doghole Ports Project (submitted by Denise Jaffke, Deborah Marx, and Matthew Lawrence): Archaeologists and historians from the National Oceanic and Atmospheric Administration's (NOAA) Office of National Marine Sanctuaries (ONMS), California State Parks (CSP)—Maritime Heritage Program, Sonoma State University, and National Park Service (NPS)—San Francisco Maritime National Historical Park spent eight days in August 2016 conducting terrestrial and underwater surveys along California's Sonoma Coast to identify and record sites and features associated with the logging industry during the mid-19th to early 20th century. This work focused on documenting small coastal ports and shipwrecks to illuminate the area's maritime cultural landscape. Rapid development of California's towns and cities after the Gold Rush, coupled with the industrial and urban development occurring around the Pacific Rim, spurred entrepreneurs to exploit the Redwood Coast to meet the massive demand for forest products. The rugged topography and lack of roads and railroads meant that the most economical way to transport the resources to market was by sea. This resulted in the use of "doghole" ports, so named because mariners joked they were barely large enough for a dog to turn around. The purpose of the project was to (1) document what remains from this industry; (2) spur local, state, and national interest in maritime heritage along the Northern California coast; and (3) draft the first maritime cultural landscape National Register of Historic Places nomination that would collectively include terrestrial and submerged resources.

The Pacific coastline between Bodega Bay and Humboldt Bay presented special problems for coastal shipping. This area has nothing that resembles a natural harbor, with an almost unbroken line of rocky bluffs plunging into water studded with numerous pinnacles and reefs (Figure 1). Yet there was profit in the lumber that existed here, with prices exploding from \$60/1000 board feet in 1848 to \$750/1000 board feet by mid-1850 (Cox 1974). Spurred on by the insatiable demand for wood products, mills and associated infrastructure developed along the northern coast to extract, process, and ship boards, railroad ties, cord wood, and tan bark to San Francisco, but also to the U.S. Eastern Seaboard, Australia, and Asia.

Regional lumber mills developed interesting and complicated apparatuses to move their products onto vessels. The trough chute, also known as a slide or apron chute, was composed of an "A" frame supporting a wooden trough tied to the shore with wire cables. A system of pulleys and wires allowed the chute to be raised and lowered to the schooner or steamer waiting below. The chute had a movable plank, called a "clapper," that facilitated hand loading of cargo by the deckhand. The length of the chute was dependent upon how far the mooring field was located offshore. During the last decades of the 19th century, improved wire rope technology allowed some doghole ports to transition to "wire chutes." In this configuration a wire cable was strung from a large drum onshore to an anchor point beyond where the vessel was moored. Cargo was then bundled together

USA - Pacific West

California



FIGURE 1. Overview of Russian Gulch doghole port. (Photo courtesy of John Foster.)

and strapped to a traveler, much like a zip line. The weight of the load transported the timber products down the wire toward the waiting ship with a braking system controlling the speed of descent. A system of wires and pulleys returned the traveler to the bluff for the next load and to move cargo and people from ship to shore.

The Fisk Mill operation provides an excellent example of a small-scale milling operation that processed and exported lumber products for 14 years but left an exceptionally small footprint of its existence on the landscape. J. C. Fisk built a mill and developed a port 2½ miles north of Salt Point in 1860. The steam-powered mill had the capacity of processing 20,000 board feet per day. A tramway then connected the mill to a warehouse and trough chute at water's edge. As indicated on a detailed map created by the U.S. Coast and Geodetic Survey in the 1870s, part of the chute's trestle was built on an offshore rock with the associated mooring field beyond that structure in deeper water. The mill remained as the only sawmill in the Salt Point Township until early 1872. Two years later the mill was dismantled and shipped to Mendocino County to begin operations further north (Sonoma County 1880). In the 14 years of operation, an estimated 42

million feet of lumber was cut and exported from the mill. The only evidence of the doghole port at Fisk Mill Cove today is the iron hardware drilled into the sandstone cliff, a small scatter of deteriorated milled lumber, and cut notches, or "rebates," where legs of the chute's A-frame were set.

The historic remains of Fort Ross Cove's transshipment infrastructure offer a notable comparative case. Since it developed as a relatively early lumber port and operated until the 1920s, the research team observed technological and logistical changes of the doghole port's configuration through time. The wharf and loading chutes were built along the northern rim of Fort Ross Cove to guard against prevailing winds and take advantage of deeper water. Originally designed as a trough chute in 1867, the lumber-loading facilities were relocated closer to the open sea and reconfigured as a wire

chute in 1910 (Davidson 1889). The chute was suspended between massive support legs, which were mortised into the rock at the cliff's base. The research team documented numerous extant elements associated with the wharf and the two chutes, including mortared rebates that secured A-frame legs, bolts and pins driven into surrounding rocks,



FIGURE 2. Eyebolt drilled into sandstone at Del Mar Landing. (Photo courtesy of Denise Jaffke, CSP MHP.)



FIGURE 3. Diver, Deborah Marx, inspecting the driveshaft of the Pomona. (Photo courtesy of Matthew Lawrence, NOAA ONMS.)

stabilizing cables that held the chute in place, and mooring points for vessels docking under the chutes. Hazards abound along this section of coastline and include undertows, shallow reefs, thick kelp, swells, and hidden rocks, yet mariners would pull into these ports, moor, and begin the process of loading cargo onto their ships. The transport vessels needed to be stabilized for loading/unloading. Buoys were sited at various spots in the cove, usually consisting of large logs with chain and anchor. Members of the crew would attach the ship's line to the buoy. Iron eye bolts set in rocks above the waterline were also used for anchoring lines onshore or in the cove. The crew would often install additional mooring lines to anchor the vessel during storms but this region is known for unpredictable weather. The *Archie and Fontie*, a schooner moored at the end of the Fisk Mill's lumber chute, was driven ashore and wrecked when a storm broke without warning.

The combined efforts of archaeologists working in both underwater and terrestrial environs located lumber-industry infrastructure at 10 of the 11 doghole ports visited. Archaeological sites were recorded at Duncan's Landing, Russian Gulch Landing, Fort Ross Cove, Gerstle Cove, Fisk Mill Cove, Timber Cove, Stillwater Cove, Stewart's Point, Bihler's Landing, and Del Mar Landing (Figure 2). Gerstle Cove and Fisk Mill Cove lie within Salt Point State Park, the Fort Ross lumber-loading features are within Fort Ross State Historic Park, and Duncan's Landing and Russian Gulch are located in Sonoma Coast State Park. Due to the difficulty in accessing Rule's Landing in Sonoma Coast State Park, the project personnel did not complete a survey of this doghole port. The underwater component of the doghole


ports is within NOAA's Greater Farallones National Marine Sanctuary (GFNMS) and is jointly managed by the California State Lands Commission.

The underwater survey team based its operations off the ONMS West Coast Regional research vessel *Fulmar*. Archaeologists and divers investigated four doghole ports underwater (Fort Ross Cove, Gerstle Cove, Fisk Mill Cove, and Duncan's Landing) and located submerged infrastructure at Fort Ross Cove and Gerstle Cove. In addition to investigating the lumber-industry infrastructure, archaeologists also sought out several shipwrecks in the area, tentatively locating the remains of the steam schooner *Acme* onshore in Kohlmer Gulch, part of Fort Ross State Historic Park. Divers visited the National Register-listed steamship *Pomona* shipwreck in Fort Ross Cove, documenting its condition

(Figure 3). Exploratory dives at various locations on the Sonoma Coast focused on the schooner *J. Eppinger*, bark *Windermere*, and wrecking steamer *Whitelaw*. While the remains of those three shipwrecks were not found, the team confirmed the location, from reports by recreational divers, of the ship *Joseph S. Spinney* near Russian Gulch in GFNMS.

Doghole ports were once the center of maritime activity along the Northern California coast and the evidence of that confluence of land and sea networks can be seen in the archaeological remains of lumber chutes and lost vessels. The story of the human interaction with the environment during the heyday of the lumber industry in Sonoma County, California can be viewed through the archaeological resources present today. While only a few scant archaeological indicators remain, these terrestrial and submerged elements act as touchstones of a once-vital maritime enterprise along the Sonoma Coast.

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13th Annual Midwest Historical Archaeology Conference October 13–15, 2017

The Tippecanoe County Historical Association (TCHA) and Purdue's Department of Anthropology and Department of History will host MHAC13, October 13–15, 2017 on the campus of Purdue University in West Lafayette, Indiana. The theme is "Reconstructing, Representing, and Reenacting: Historical Archaeology and Public Education." The year 2017 marks both the 300th anniversary of the founding of Fort Ouiatenon, a French fur trade post in Tippecanoe County, and the 50th anniversary of the Feast of the Hunter's Moon, one of the largest annual reenactments of the 18th-century fur trade in the United States. To commemorate these anniversary milestones, part of the conference will be dedicated to Fort Ouiatenon past and present and the fur trade and historical reenactments more generally. Papers, posters, and lightning-round talks on any topic related to historical archaeology in the Midwest are also welcome, but we especially encourage potential presenters to focus on the use of historical archaeology data (artifacts, museum objects, buildings, landscapes) to reconstruct, represent, or reenact history for a variety of audiences. Registration and logistical information and links will soon be available online. Keep watching the Purdue University Department of Anthropology website for details: <https://www.cla.purdue.edu/anthropology/>.





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