



# Council for Northeast Historical Archaeology NEWSLETTER

October 2019

Number 104

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CNEHA Has a Permanent Address for Its Website:  
<http://www.cneha.org/>

## COUNCIL FOR NORTHEAST HISTORICAL ARCHAEOLOGY

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*Northeast Historical Archaeology* seeks manuscripts dealing with historical archaeology in the Northeast region, including field reports, artifact studies, and analytical presentations (e.g., physical anthropology, palynology, faunal analysis, etc.). We also welcome commentary and opinion pieces. To submit a manuscript or request preparation of manuscript guidelines, write to Maria O'Donovan, Editor, *Northeast Historical Archaeology*, c/o Public Archaeology Facility, Binghamton University, Binghamton, NY 13902-6000. [odonovan@binghamton.edu](mailto:odonovan@binghamton.edu)

## CNEHA Facebook Page

CNEHA has a Facebook page! Log onto Facebook and then search for Council for Northeast Historical Archaeology to see announcements about conferences and other updates.



You can join us on Twitter now too! @CNEHA\_org

## UPDATE—*Northeast Historical Archaeology* Reported by: Maria O'Donovan

I can't believe it has been almost three years since I began my tenure as editor! The learning curve has been a bit steep at times and I want to thank you for all your help and patience as I have settled into this role. There have been delays in production—Volume 47 with the thematic sect from the Smithsonian Environmental Research Center (SERC) will be out soon—and I am exploring several options to speed up the production process. I would welcome any input or suggestions that you have.

We have several thematic sections slated for publication in the journal. Volume 48 will feature a thematic section on Fredericksburg, Virginia, with articles on the architecture of ice houses, tenant farms, stoneware ceramic repair, and slavery in an urban landscape. Contributed articles scheduled for publication in Volume 48 include a discussion of tavern assemblage patterning and window leads. A retrospective on archaeology at Strawberry Banke and a series of papers on working class heritage and community outreach will also be featured in future issues.

I hope to see all of you at the annual meeting in Lake George, NY. Please stop by and see me at the CNEHA table in the book room to chat about submitting your research for publication or any ideas you have for the journal. I will also have back issues of *Northeast Historical Archaeology* and *Telling Time* posters available for purchase. If you miss me at the meeting, you can also purchase them by contacting me at [neha@binghamton.edu](mailto:neha@binghamton.edu) or visiting our web page at <https://www.binghamton.edu/paf/neha.html>. Posters are priced at \$10.00 each plus shipping and back issues of *Northeast Historical Archaeology* at \$10.00-\$13.00 plus shipping.

## Email Addresses

Please update your email address (as necessary). You may do this through the CNEHA website, <http://www.cneha.org/>

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## NEWSLETTER EDITOR'S REPORT

Reported by: David Starbuck, Newsletter Editor

Please send me copy for the March 2020 issue (No. 105) of the CNEHA Newsletter by March 1 to ensure that the newsletter is ready to go on-line by late March.

### Provincial Editors:

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WEST VIRGINIA: This position is now open. If you are interested, please contact David Starbuck.

## MINUTES CNEHA BUSINESS MEETING HALIFAX, NOVA SCOTIA

October 21, 2018

Sunday, October 21, 2018, Halifax, Nova Scotia,  
7:49AM

Approval of the minutes from the 2017 annual business meeting held on Sunday, November 12, 2017 in Ottawa published in the March 2018 newsletter.

Motion to Accept the 2017 Business Meeting Minutes:  
Mary Beaudry  
Motion 2nd: Richard Schaefer

The motion carried unanimously.

### Old Business

#### 1. Chair's report: Karen Metheny

The organization continues to focus on advocacy, membership and communicating with members on developing programs.

#### 2. Secretary Report: Nancy Brighton

Nothing to report

#### 3. Treasurer's report:

##### a. Overall Finances and US Account: Sara Mascia

The starting 2018 balance was \$14,539 with expendi-

tures totaling \$ 7,066 and income of \$ 7,472. There is \$27,500 in the checking account with \$10,000 in a reserve fund investment CD that matures in September and will be used for the publication of future journals.

b. *Canadian Account:* Joe Last

The 2018 starting balance was \$5,529.83. Credits include \$2,013.45 from membership and \$3,000.50 from US funds for the journal. Total revenue is \$5,013.95. Expenditures include \$335.61 for postage and stationary supplies (printer ink, etc.). The current 2018 balance is \$10,208.17. There are still anticipated expenditures for the printing and mailing of the journal.

Motion to Accept the Treasurer's Report: Alison Bain  
Motion 2nd: Steve Oberon

The motion carried unanimously.

3. **Membership reports:**

a. *Individual US:* Sara Mascia for Ed Morin

Total membership includes 254 members, including Canada. The total membership consists of 125 individual, 24 student, 22 joint, 16 fellow, 17 retired, 18 institution, and 3 business.

Overall membership is lower than it has been in previous years. The organization needs to recruit new members and improve number by 50 members.

b. *Individual Canadian:* Joe Last

Membership numbers, as of October 9, includes 107 total members, consisting of 53 individuals, 18 students, 12 joint, eight fellow, six life, nine business/institution, and one retired. The breakout of members by province indicates there are two members from Alberta, five from New Brunswick, 16 from Newfoundland, 21 from Nova Scotia, 15 from Quebec and a single member from Prince Edward Island. Joe ended his report with a thank you to the professors who bring or encourage their students' participation in the conferences.

4. **Publications and communications reports:**

a. *Newsletter:* David Starbuck

Two newsletters were put out – one in March and one in June. The October newsletter is waiting to go as soon as some additional copy is received. Anyone with copy should send it to David by October 26. David noted that some states and provinces never submit copy – the same two or three editors usually submit copy for the newsletters.

Over the past year, no copy was received for 10 states and provinces. David will contact the editors to see if they still want to be editors. New editors are needed for Virginia and West Virginia. Anyone who is interested in acting as an editor for those states should contact David.

b. *Journal:* Maria O'Donovan

Maria thanked the membership for its patience with delay of Volume 46 on Philadelphia Queensware. It is currently being printed and will be mailed out shortly. Volume 47 is in production with articles from the Smithsonian Environmental Research Center on landscape and the environment, as well as other articles on butchery and smoking pipes.

Maria thanked editorial assistants Catherine Seibert and Jesse Siegel for getting Volume 46 out after working in the field over summer.

The journal is in good financial health. There have been some excellent papers given at the conference and these papers should be submitted to the journal. The conference is where we share our work with each other. The journal is where we get the word out. It's a well-respected publication and the journal office is easy to work with. If anyone has seen papers that should be worked into an article, put a suggestion in the bag on the back for Maria to solicit from the presenters.

Karen congratulated Maria and journal staff on their first issue coming out this year.

c. *Web page:* Silas Hurry

Karen thanked and said good-bye to Silas as web coordinator. Silas was thanked with round of applause. Silas noted it was an easy job as web master, Christy Morgenstern, is wonderful. Travis Parno will be taking over as the liaison – contact him for content.

d. *Social Media:* Christa Beranek

Christa thanked the conference committee for its use of social media for promotion. CNEHA has a Facebook, Twitter and Instagram accounts - the latter formed by conference committee. Check social media for conference updates. Travis is contact for twitter. Contact Christa or Laura for Facebook posts, such as historic photos of past conferences or upcoming events, etc.

5. **Programs and Meetings:**

a. *2018 Halifax, Nova Scotia:*



The organizers thanked everyone for coming and thanked all of the volunteers. They hope everyone had a good time in Halifax. They had set a goal of 150 delegates to the meeting and, as of yesterday, there were 145 delegates. The conference had great support from local companies especially the regional archaeological companies. The organizers raised \$24,500 and were able to accomplish many things for the conference. Finally, the organizers thank the presenters for all of the papers – it's always great to get archaeological minds together.

b. *2019 Lake George/Fort William Henry*: David Starbuck

David is looking forward to seeing everyone in Lake George, NY – it's a great location. Fort William Henry has hosted New York State meetings in the past. The current plan is to have an all-day tour of military sites in the region. There will also be a tour of Adirondack Iron and Steel Company and possibly stop at the Starbuck farm to see the farm exhibits

Phil Dunning will conduct a workshop entitled "Alcohol and the Army". It will be a great venue. The dates are November 7-10, 2019. It is a little late because October has a number of competing events upstate and November will get everyone the off-season rate.

c. *2020 Plymouth, MA/joint meeting with SHA/SPMA for 400th anniversary of Plymouth Colony*: Karen Metheny

Negotiations for a contract in Plymouth, Massachusetts, for November 5-8, 2020 is ongoing. David Landon and Christa Beranek will be co-hosting with Karen. We will be inviting the Society for Historical Archaeology and the Society for Post-Medieval Archaeology to attend for the 400th anniversary of the founding of Plymouth colony and the effects of colonization. This will be the second event, as there will be one in Plymouth, UK. The team is working with Plymouth 400 Committee, Historic Plymouth and the Wampanoag to create events. There is also an on-going investigation in downtown Plymouth.

d. *Future Conferences St Mary's City in 2021 and possibly Montreal in 2022*: Karen Metheny

There is the potential to return to St Mary's City in 2021 and we are looking for a Canadian team to set up a meeting in Montreal for the following year.

6. **Student Paper Competition**: Nancy Brighton

There were four students who entered this year's student paper competition. They are:

John Archer, Memorial University, who gave a paper on Ferryland entitled "The First Foundation of a Good House: Examining Ferryland's Mansion House Kitchen"

Meghann Livingston, Memorial University, "From the Sea, Work': Investigating Landscape and Lifeways at Anse a Bertrand, Saint-Pierre et Miquelon, 1670-1970"

Alex Spiwak, Memorial University, "'A slator or two': Exploring the 17th century slate industry at Ferryland"

Solene Gauthier, Laval University, "Seed and Insects in an Early 19th Century Privy: (Un)changing Foodways During Quebec City's Golden Age"

The winner is Alex Spiwak for her paper that analyzed roof slate – looking at processing and finishing techniques in a unique look at early colonial architecture.

Alex will receive \$100 and a paid 2019 membership.

7. **Poster Competition**:

*Public Education Poster Session on Collaborative Science*: Karen Metheny

The winner of the poster session is RMC volunteer research group. Each of the authors will receive a certificate and each of the authors will receive one bottle of Hunky Dory beer.

8. **Education and Outreach**

*Professional enrichment program (Geomatics and GIS)*: Karen Metheny

A professional enrichment program on Geomatics and GIS was offered as a full-day workshop. Each participant received a certificate. The Board is accepting recommendations for future workshops.

*Recruitment/student members/young professionals*: Stéphane Noël

Sixty-six people responded to the membership survey and the data is being analyzed for a future presentation in the newsletter. The goal of this survey is to identify what we do well and what we can improve. We hope to use the survey to develop ideas to recruit new members. In particular, we look to use social media even more and to market CNEHA even more to show what we do and what we are about.

Most noted the congeniality of the organization and its

human side. Eighty percent of respondents heard about CNEHA from professors or colleagues.

As a way to get members to respond, a prize, consisting of a one-year membership, was being offered to a randomly drawn name of those responding. The winner is Rob Ferguson.

### ***New Business***

#### **1. Nominations and Elections Committee:**

Nancy Brighton

For this year's election we used Survey methods. It allowed for a greater response (more the 100 responses) but it has limited reporting without paying additional fees. A total of 60 people responded; the median response time was 35 seconds. The result was the re-election/election of Joe Last, Sara Mascia, Laura Masur, Karen Metheny and Richard Veit to the Board.

At Thursday night's Board meeting, Karen Metheny was re-elected as Chairperson, Sara Mascia was re-elected as Treasurer and Joe Last was re-elected as Vice-Chair for Canada.

#### **2. Other new business**

##### ***a. Resolution of Thanks to the Conference Committee:*** Nancy Brighton

Good Morning. Whereas, the 2018 Council for Northeast Historical Archaeology Conference has been a resounding success;

Whereas, Halifax has once again proven to be a most spectacular venue for a conference; and

Whereas, we have all enjoyed the informative tours of the Albion Mines Foundry Site in Stellarton and walking tours of Halifax and workshops on Geomatics and GIS, Artifact Photography, and Mapping Sites with Magnetic Susceptibility; and

Whereas, the Lord Nelson Hotel has provided welcoming venues for toasts and talks; and

Whereas, the entire conference has been conducive to the dissemination of knowledge and stimulating exchange of ideas;

Now therefore let it be resolved that the Council for Northeast Historical Archaeology wishes to express its appreciation and gratitude for all of the hard work, long hours and spectacular effort of the conference committee:

Catherine Cottreau-Robins and Jonathan Fowler,  
Conference Co-Chairs

April MacIntyre, Program Chair

Courtney Glen and Darryl Kelman, Program  
Committee

Rob Ferguson, Registration Chair

Denise Hansen and Janet Stoddard,

Registration Committee

Sara Beanlands, Catherine Cottreau-Robins,

Jonathan Fowler and Jeff Turner,

Finance and Corporate Sponsorship Committee

Jonathan Fowler and Sarah Ingram,

Conference Website and Social Media

Vanessa Smith and Laura De Boer,

Book Room, Raffle and Poster Competition

Committee

Kiersten Green and Sarah Ingram,

Volunteer Coordination and Beer Social

Committee

Catherine Cottreau- Robins

for the Logo Design; and

Laura de Boer

for the T-shirt Design

Workshop Leaders and Tour Guides:

Greg Baker

Troy DeSouza

Jonathan Fowler

Duncan McNeill

Vanessa Smith

Laura De Boer,

for her tour of the Albion Mines and

David Jones

for his enthusiastic and passionate walking tours  
of Halifax

To all of the volunteers and students who have provided invaluable support and general go-fer services to ensure the conference ran smoothly

To the Sponsors for their extremely generous financial and other support, including:

Beta Analytic Testing Laboratory

Boreas Heritage

The Cultural Resource Management Group

Davis Macintyre and Associates

Kelman Heritage Consulting

Killam Apartment Reit

Lalonde AMS

New Brunswick Canada

Nova Scotia Power

Sensors and Software

Saint Mary's University

To Paul Cheetham, Bournemouth University for his thoughtful and humorous keynote address and the Garrison Brewing Company for an excellent reception site on Friday Night.

To the staff of the Maritime Museum of the Atlantic for the Saturday night “banquet.”

To the *Fine Tuners* for their toe-tapping entertainment

To the session chairs, who have kept or will keep their sessions organized or running on time:

Sara Beanlands  
Stephen Davis  
Rebecca Dunham  
Karen Metheny  
Keith Mercer  
Stéphane Noël  
Travis Parno, and  
Barry Gaulton

To all the contributors to the raffle and the staff of the Lord Nelson Hotel for excellent and expeditious service,

Let us give a round of applause for the organizers, students, presenters and supporters of this wonderfully informative and most enjoyable conference.

b. *Resolution of Thanks to Outgoing Board Member Christa Beranek:* Karen Metheny

Whereas the term of office for a member of the Executive Board for the Council for Northeast Historical Archaeology is expiring, the Council acknowledges and appreciates the contribution of Christa Beranek;

Christa has served three terms on the Board and has been a vital member of several committees including the Nominating Committee and the Journal Advisory Committee. During her tenure she also assisted with the Student Paper Competition and was instrumental in creating and administering the CNEHA Facebook page while working with the Publications Committee on Social Media.

Although leaving the board, Christa will be working with the 2020 Conference Committee on our future meeting in Plymouth, Massachusetts.

Now, therefore be it resolved the Council expresses its sincere appreciation and thanks Christa with a round of applause.

c. *Resolution of Thanks to Outgoing Web Coordinator Silas Hurry:* Sara Mascia

Good Morning. It is my pleasure to acknowledge the hard work and dedication of outgoing web coordinator, Silas Hurry. Silas’ most significant contribution to CNEHA has been to expand CNEHA’s public and

membership outreach through the Internet. Silas almost singlehandedly brought CNEHA into the digital age. He not only designed the Council’s first website but arranged with St. Mary’s College to host the site for many years. As CNEHA’s Webmaster, Silas dutifully maintained the site at the college and then helped to shepherd the site to its current location in 2000. He helped to create online tools for membership and conference registration, as well as other online features and resources for CNEHA’s membership. He has helped CNEHA to not only expand its digital presence but to envision the website as a means of fostering new connections and new interest in the work of archaeology.

The Council hereby acknowledges and appreciates the long-term and unfailing contributions of Silas Hurry as web coordinator.

Let it be resolved:

Whereas, Silas Hurry served for many years as CNEHA’s webmaster when the website was first created at St Mary’s City and continued to serve as web coordinator when the website switched to its own domain;

Whereas, under his guidance, the CNEHA website expanded to include registration, membership, archives of past meetings, access to the entire run of newsletters, and gallery photos of conference attendees;

Whereas, Silas faithfully submitted a report on website usage twice a year, served as an excellent liaison with our web site host, implemented the board’s suggestions for improvements as well as many of his own recommendations, and turned our website into a site on which we continue to rely and of which we are justly proud;

Whereas, he is stepping down from his position of web coordinator;

Therefore, let the Council express its sincere appreciation for his long years of service and show our thanks with a hearty round of applause for Silas.

Motion to Adjourn the meeting was made by Sara Mascia.

Motion 2nd: Maria O’Donovan

The meeting ended at 8:31AM

Respectfully submitted,

Nancy J. Brighton  
Secretary

## NEW PUBLICATION

The North Jersey Highlands Historical Society is pleased to announce publication of:

**RAMAPOUGH LENAPE HERITAGE:  
ARCHAEOLOGY, HISTORY & CULTURE:  
10,500 B.C. TO THE PRESENT**

By Edward J. Lenik

With the publication of his fourth book on the Ramapough Lenape people of northern New Jersey and southeastern New York, archaeologist Edward J. Lenik celebrates a half century of research and investigation. *Ramapough Lenape Heritage* focuses on the archaeological evidence of continuous indigenous occupation Lenik and others have uncovered from early 20th century explorations by amateur archaeologists to the careful, scientific excavations and analyses of the late 20th and early 21st century professionals like himself. Much of the material in this book can be found only in cultural resource studies filed in New York and New Jersey state repositories.

The Stag Run Village site, the Trading Post site, the Sheffield Farm House site, the Indian Field Village site, Mountainside Farm and numerous open-air campsites, workshops, lithic scatter and quarry sites are discussed. The mysterious Prehistoric Walls site in Sloatsburg, NY, is presented in detail with new insights. Halifax or Green Mountain Valley in Mahwah, NJ, is examined both archaeologically and historically using census data to identify some of its former occupants.

The 280-page book, printed in color, features 13 tables and 128 illustrations including photographs, maps, field sketches and drawings.

*Ramapough Lenape Heritage* can be purchased for \$20 from the North Jersey Highlands Historical Society Bookshop at Ringwood Manor State Park or can be ordered by sending a check for \$20 plus \$4 shipping and handling to North Jersey Highland Historical Society (NJHHS) at P.O. Box 248, Ringwood, NJ 07456.

Lenik's 3 previous volumes are also available:

<i>Indians in the Ramapos. Survival, Persistence and Presence</i> (1999)	\$10
<i>Ramapough Mountain Indians: People, Places and Cultural Traditions</i> (2011)	\$20
<i>Keepers of the Pass, The Ramapough Lenape Indians</i> (2016)	\$20

## CURRENT RESEARCH

### New York State

Reported by: Michael Lucas

### Western New York

[Submitted by Ryan Austin]

Phase III data recovery excavations undertaken for the planned Western New York Science & Technology Advanced Manufacturing Park (STAMP) by the SUNY at Buffalo Archaeological Survey investigated two lower socio-economic status Euro-American farmsteads, STAMP Sites 13 and 19. Both sites are located along the northern shoulder of Patterson Road, immediately adjacent and to the east of the Tonawanda Indian Reservation in the Town of Alabama, Genesee County, New York (Figure 1).

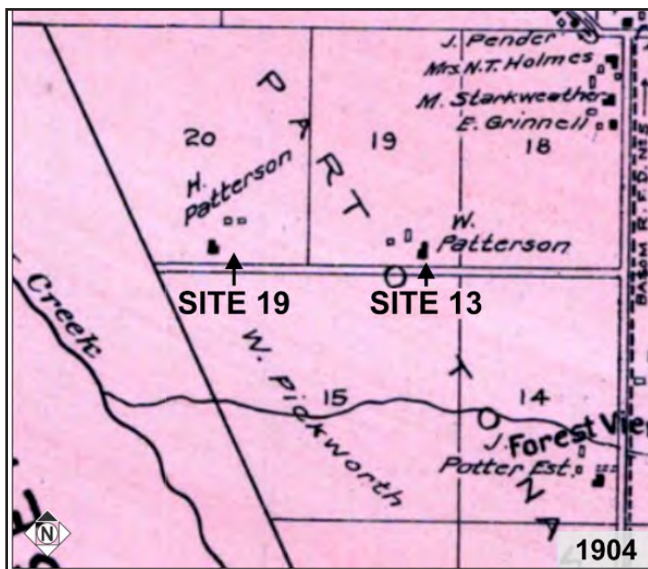


Figure 1. Location of STAMP Site 13 and Site 19 on the 1904 The New Century Atlas of Genesee County,

Sites 13 and 19 were owned and operated by two successive generations of the Patterson family during the mid-19th and early 20th centuries. The first generation consists of the household of James and Laura Patterson who occupied Site 13 between 1860 and the late-1870s/early-1880s. The second generation is associated with two of the Pattersons' sons: the household of Hiram B. Patterson, his wife, Fanny, and their children occupied Site 19 between c.1881 and 1926; while that of Orrin W. Patterson and his wife Mary occupied Site 13 between c.1878 and 1915. Afterwards, both sites were occupied by a series of transient owners and tenants until the mid-20th century, at which point the domestic and agricultural structures were abandoned, while the cultivated fields were incorporated into the holdings of neighboring farmers.



Data recovery excavations studied the partially-intact stone foundation pits of each site's farmhouse and barn outbuilding(s), wells and fence-lines, as well as identified and sampled domestic sheet midden scatters and buried refuse pit features found in the surrounding yard areas. Artifacts recovered from Site 13 suggest that the first generation Patterson household spent most of its available funds on farmstead improvements, as opposed to the acquisition of portable material culture such as ceramic or glass wares that could be used to display notions of social status. Food related ceramics included the lowest-cost decorative wares, such as shell-edged or annular banded vessels, as well as non-matching higher cost transfer-printed wares that may have been purchased piecemeal.

Instead of the purchase of status items and additional farmland, including the purchase of lands that would later be incorporated into Site 19, Site 13's first occupation household improved their farmstead's infrastructure. This included the construction of a shed-type addition along the barn's eastern façade used to house animals, as well as the construction of a fenced paddock that was watered with its own well. The majority of household trash was discarded in the farmhouse's immediate perimeter, particularly in its front and rear yards. This deposition occurred as a result of the broadcast discard of household refuse through open windows or doorways directly onto the ground surface. It also appears that the Site 13 occupants did attempt to periodically sweep away surface debris from the house's northern yard where it accumulated along the fenced margins.

During the second-generation occupation at Sites 13 and 19, both Patterson brothers' farms were semi-subsistence operations employing different production strategies from that of their parents. Unlike James and Laura, who had able-bodied adult sons, neither Hiram nor Orrin had male children who could contribute manual labor, and therefore had to supplement their own labor with that of non-family farm laborers. Hiram and Orrin themselves continued to farm into old-age and neither brother passed their farms on to their children. It is also possible that the declining local agricultural economy of the late 19th and early 20th centuries, combined with the marginal nature of the farmland, made the prospects of future agricultural work unattractive to the next generation.

Several other comparisons can be made regarding both sites' second-generation occupations. In terms of structural remains, both farmhouses have mortared cobblestone foundation walls covered with concrete parge coats, and both houses have a cistern built into their foundation pits that was coated by a water-proof concrete lining. However, Site 13's farmhouse appears

to have a cruder-built foundation, with individual building stones being non-uniform in size and shape. The surviving walls are roughly/unevenly built, and following the erosion of the mortar, have slumped into the foundation pit's open base. Conversely, Site 19's farmhouse has foundation walls built from dressed stones that were selected for both shape and uniformity, and their mortar bindings have remained intact.

Machine-cut nails recovered from both sites indicate that the farmhouses were balloon-framed structures. However, it should be noted that there are far more cut nails at Site 19, many of which are uniform in size and shape and are specialized for carpentry or finishing work. Also, there are more wire nails at Site 19, as well as more window glass by volume. While it is possible that the construction-related debris recovered during Site 19's second occupation period is related to the construction of the house's banked northern wing, it is also possible that these materials reflect a general improvement in house construction techniques developed during the late 19th century.

In terms of portable material culture, the second generation occupants of both sites used similar domestic ceramic and glass vessels, some of which may have been originally acquired and used during Site 13's first generation occupation and were later curated by members of both sites' second generation households. Both sites' second-generation occupations also appear to have continued to use ceramic food storage vessels, even after glass canning jar technology became more widely available during the late 19th/early 20th centuries. Moreover, both sites' second-generation households purchased and used undecorated and lower-cost annular banded and shell-edged decorated wares, while more expensive transfer-printed and polychrome decal-decorated vessels appear to have been acquired sporadically as non-matching single items.

Moreover, both second generation Patterson households continued to dispose of household refuse in broadly scattered surface sheet middens located immediately adjacent to living and working spaces well into the 20th century. However, it appears that Orrin W. Patterson's household at Site 13 made more of an effort to segregate their trash into a relatively discreet refuse scatter located within the barn yard margins. In contrast, the bulk of Hiram B. Patterson's household refuse disposal at Site 19 occurred within the farmhouse's immediate perimeter.

Both Site 13 and Site 19 retain archaeological integrity and document rural lifeways and consumer behavior during the late 19th and early 20th centuries in rural western New York. A final report on the 2018 data recovery investigation is in progress.

## **Delaware**

Reported by: Lu Ann De Cunzo

### **Colonial Delaware Archaeology Project**

[Submitted by: Lu Ann De Cunzo]

During Spring semester 2019, the University of Delaware (UD) Anthropology Department collaborated with the Archaeological Society of Delaware (ASD) to advance the Colonial Delaware Archaeology Project. This new collaboration uses archaeological techniques to learn more about the encounters among Lenape, Susquehannock, European, and African peoples in the lower Delaware Valley in the seventeenth and early eighteenth centuries.

The project started as a collaboration between UD Anthropology and the Delaware Division of Historical and Cultural Affairs (DHCA) in 1992. DHCA funded a location and identification survey along the Appoquinimink and Drawyers Creek drainages from Delaware Bay to Route 13, with a focus on early colonial sites. We found a partner in Mr. John Coleman, local farmer and avid avocational archaeologist. He generously shared his multi-generational knowledge of his family farm, and his extensive collections of artifacts assembled from decades of field-walking. With Mr. Coleman's guidance and support, the UD and ASD team examined the area that has yielded the greatest concentration of seventeenth and early eighteenth-century materials.

William Warner was granted a 400-acre parcel along the Appoquinimink Creek in 1671. The property stood not far from the Susquehannock trading post established to facilitate trade across the Delmarva peninsula and along the Delaware coast. Warner sold the tract to Hans Hanson who grazed cattle on the marshland and built a water mill nearby with his neighbors. In 1679, Hendrick Williams purchased the plantation, a successful New Castle merchant. At his death in 1694, his son inherited the Appoquinimink plantation on which he raised livestock. The property remained in the Williams family until 1760, when yeoman Edmond Liston and his wife Rachel Farson purchased it. The farm passed in the Liston family for several generations. The Colemans moved to the farm in the World War II era.

Under the direction of Dr. Lu Ann De Cunzo, UD Anthropology, UD archaeology staff, and professional archaeologists active in ASD, UD students enrolled in an introductory archaeological field methods course partnered with ASD members seeking training and experience. Following an introductory orientation session, team members surveyed in a grid, located, mapped and collected hundreds of metal detecting 'hits' and surface artifacts and excavated 60 STPs and four larger exca-

vation units. Soil scientist Philip King, USDA, donated time and equipment to complete a GPR survey of the area, locating two anomalies. Curtis McCoy, Dovetail CRG and ASD chapter president, directed site survey and mapping, and produced GIS distribution maps to guide future research. The collections will be processed, analyzed, curated and returned to the Colemans to stay with the farm.

The fieldwork produced native lithic tools and debitage, nails, redwares, and other pre-Revolutionary ceramics and small finds documenting thousands of years of settlement on the ridge overlooking the creek and marsh. A possible cellar or well filled in the 18th century and stone fill stabilizing a possible landing will number among the targets of additional research. UD and ASD plan to engage the larger community in future projects.

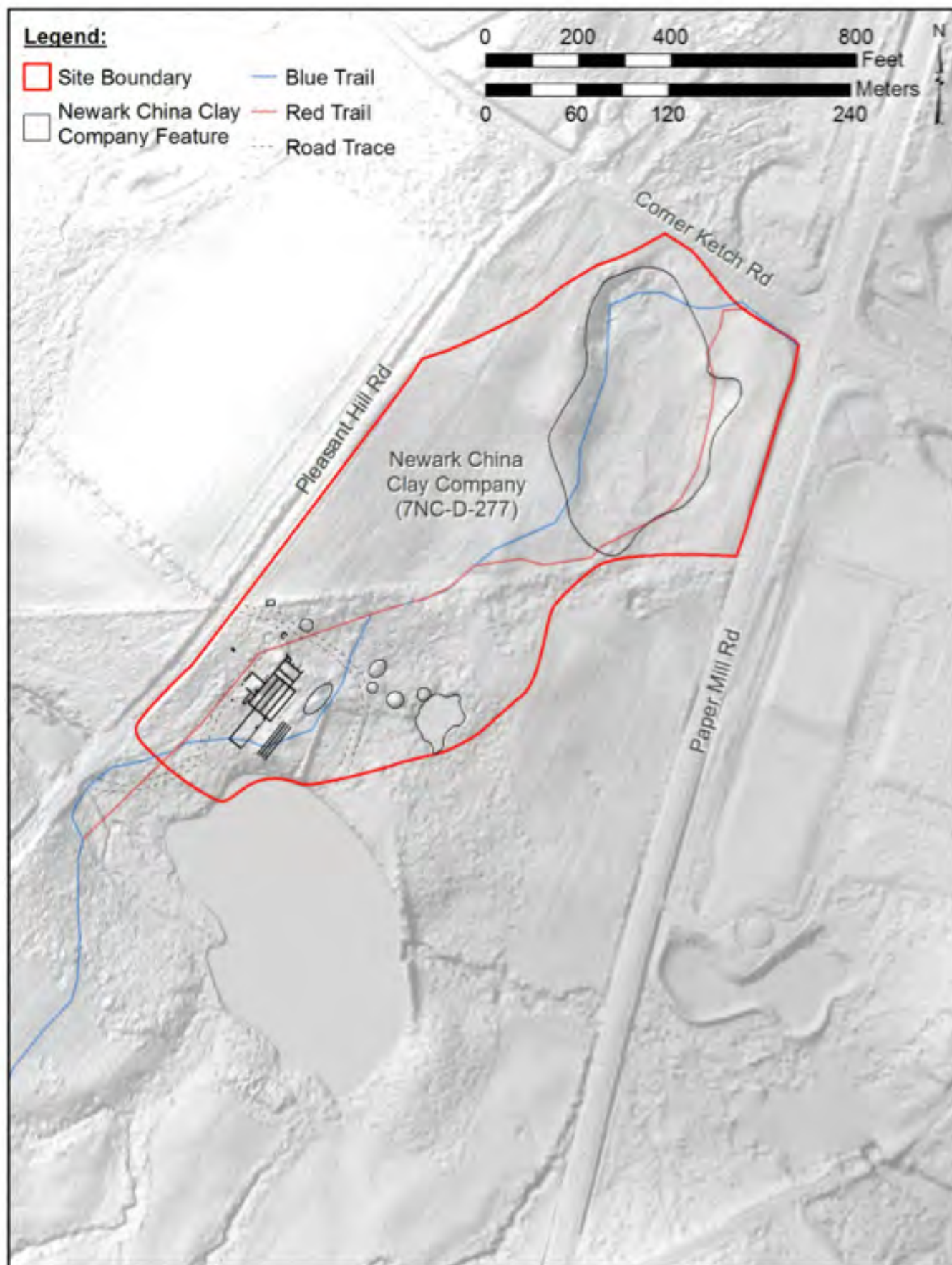
### **Tri-Valley Trail at White Clay Creek State Park**

[Submitted by: Bill Liebeknecht, MA, RPA and Curtis McCoy, MS, RPA]

In 2017, on behalf of the Cultural Resources Unit of the Delaware Division of State Parks and Recreation, Department of Natural Resources and Environmental Control (DNREC), Dovetail Cultural Resource Group (Dovetail) conducted a Phase I-level archaeological survey for the proposed construction of the Tri-Valley Trail at White Clay Creek State Park in Newark, Delaware (Chase and Liebeknecht 2017). The project corridor is 6,020-feet (1,834.9 m) in length.

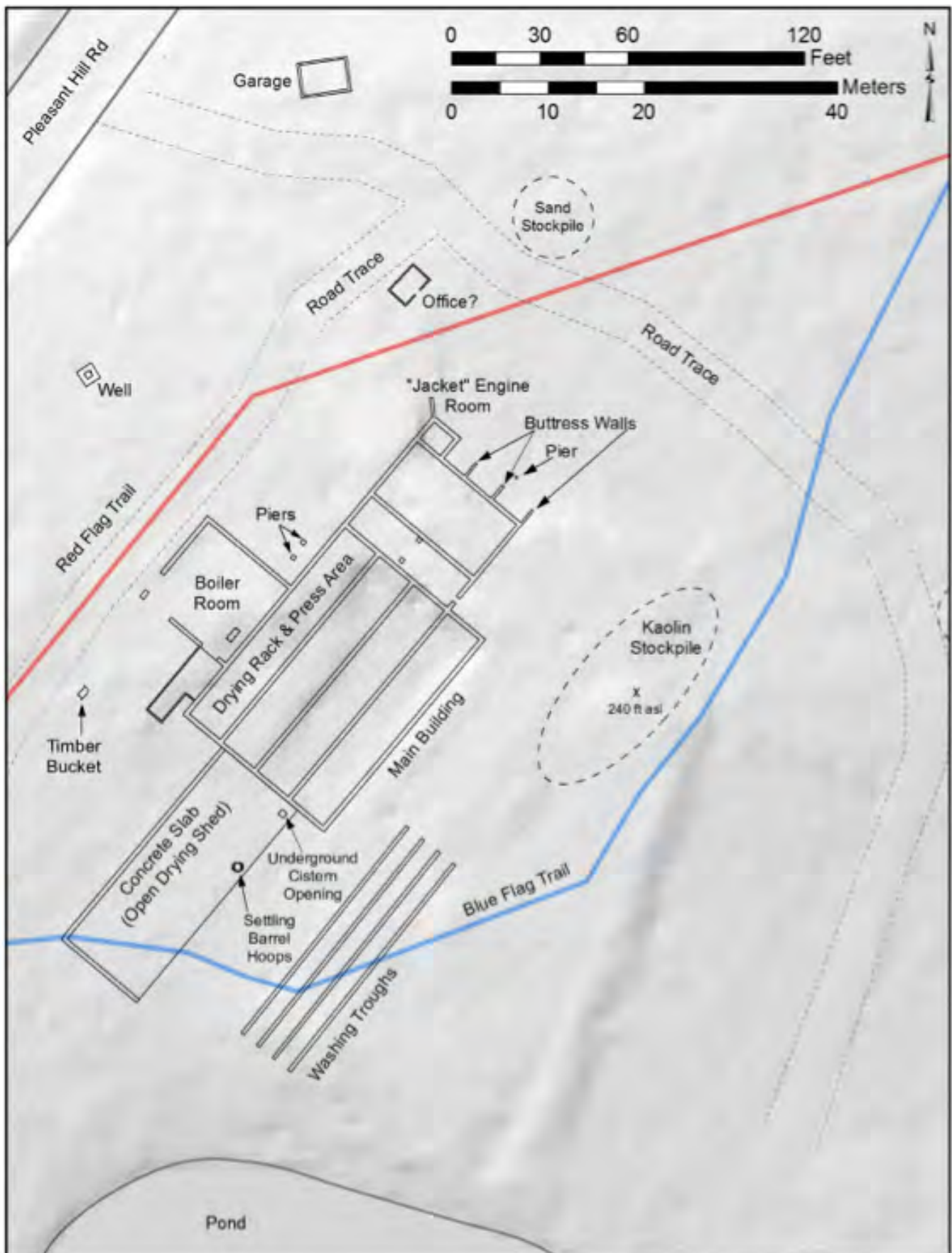
The project's aim was to identify any archaeological resources within the project's area of potential effects (APE) that may be affected by the proposed undertaking. All identified resources were then evaluated to preliminarily establish the extent and potential significance of the resource for listing in the National Register of Historic Places (NRHP) per the Criteria of Evaluation (36 CFR 60) for purposes of project planning and resource management.

The Phase I-level archaeological survey identified no new resources within the project area that meet the Delaware Division of Historical and Cultural Affairs State Historic Preservation Office (DE SHPO) threshold for archaeological sites in the state. It did, however, expand the identified limits of the Newark China Company site (N09354/7NC-D-277). The factory complex was active from 1912 to 1942. The factory complex consists of numerous foundations for the processing of kaolin clay, stockpiled materials (sand, mica and kaolin clay), and hand-dug clay mining pits (now filled with water). The project area was photo-documented, and a rough map was created taking two GPS points from the corners of all structures observed. All buildings were then manually measured using hand reel tapes and cross-referenced



Map of the Newark China Clay Company Complex on LiDAR Hillshade (FirstMap 2017).





*Detailed Map of the Newark China Clay Company Complex on LiDAR Hillshade (FirstMap 2017).*



with a map based on an interview with a former factory worker.

Once numerous operations such as this are a forgotten part of the modern landscape. The Newark China Clay Company is one of only a handful of intact clay mining complexes in the northeast. Typically these sites were blended back into the landscape following closure of the mines so that the land could be reused. Dovetail recommended that the Newark China Clay Company (7NC-D-277) was potentially eligible for listing in the NRHP under Criteria A, C, and D for its association with the local community's developmental history, the development of the kaolin clay industry and establishment of industrial areas outside of nearby city centers in the early-twentieth century, the presence of intact building remains and associated landscape, and its potential to yield further information on area history pending additional archaeological study. Dovetail further recommended extensive clearing of the understory followed by detailed mapping of the numerous foundations, features and former industrial landscape associated with the Newark China Clay Company before the Tri-Valley Trail was to be constructed.

Intense clearing revealed more than we could have hoped for, including a 6 to 8-foot tall stockpiled mound of raw kaolin clay, washing troughs, iron hoops from settling large barrels and an iron timber bucket which was used to lower men down into the pits in the morning (and out at the end of the day), lower timbers down into the pit for shoring, remove water and to haul clay from the pits. Clearing allowed for detailed mapping

which was then geo-referenced to a Lidar map of the area. An article on the kaolin industry in Southeast Pennsylvania and North Delaware will be forthcoming in *Pennsylvania Archaeologist*.

#### References Cited:

Chase, Kristine A. and William B. Liebeknecht 2017 Phase I Archaeological Survey of Phase II of the Trivalley Trail, White Clay Creek State Park, City of Newark, Delaware. Dovetail Cultural Resource Group, Wilmington, Delaware.

#### FirstMap

2017 Delaware Lidar DEM. Electronic document, [https://firstmap.gis.delaware.gov/arcgis/rest/services/Elevation/DE\\_Lidar\\_DEM/ImageServer](https://firstmap.gis.delaware.gov/arcgis/rest/services/Elevation/DE_Lidar_DEM/ImageServer), accessed August 2017.

### Pennsylvania

Reported by: Gary Coppock

#### Archaeology in Action as Veterans Outreach at Fort Ligonier

[Submitted by: Angie Jaillet-Wentling, PennDOT]

On August 3 and 4, 2019, Fort Ligonier (36WM0071) hosted two veterans groups in an outreach program put together by Dr. Jonathan Burns, Juniata College, Cultural Resource Institute, Angie Jaillet-Wentling, PennDOT, and Schott Shaffer, PennDOT. On Saturday, volunteers from Team Rubicon (veterans and first responders focusing on disaster relief) and their families helped to excavate portions of a trench measuring



Figure 1. Laying out and explaining the research goals for the event, Dr. Burns and Scott Shaffer explain techniques to the volunteers. (Photo by Michelle Ufner)



Figure 2.  
*Team Rubicon volunteers and family members sift soils from the trench excavation. (Photo by Michelle Ufner)*

50-cm by 5-meters and helped metal detect to try to aid in the attempts to locate one of the artillery batteries or the line of communication. On Sunday, volunteers from The Mission Continues (a veterans service organization) helped screen, map, and backfill the excavations. Most of the recovered artifacts appear to date to the 20th and 19th centuries and were recovered from the A horizon. Both bedrock and fill deposits were encountered with some indications that disturbances may be related to the late 20th century amphitheater seating known to have been in the area.

A total of approximately sixteen volunteers were present on Saturday and ten on Sunday with a number of curious museum and site visitors stopping by. At least one young aspiring kindergartner/archaeologist brought along his Mickey Mouse adventure kit complete with a trowel and pick. Team Rubicon volunteer Timothy Smith, Master Sergeant, US Air Force (Retired), wrote to express his thanks saying, "I for one had an absolute BLAST." On leaving the site Sunday afternoon, the volunteers were invited to attend a lecture by US Army veteran and artist-in-residence, Elise Wigle-Wells, who created a number of pieces as part of her work entitled HER, focusing on the timeless experiences of women in war and conflict, and featured throughout the fort's spaces.

Between the unfailing support of Fort Ligonier staff, collaboration between professional and avocational archaeologists, and the positive experiences and reactions from the veterans groups, we hope to do it again! Looking forward to next year, Dr. Burns plans to return with a field school for students in the summer as

part of ongoing research. Additionally, we're hoping to host more veterans on-site in the coming years as part of the ongoing public and veterans outreach efforts. This year's event was covered by Pittsburgh's Tribune Review (TribLive) <https://triblive.com/local/westmoreland/veterans-help-with-archaeological-dig-at-fort-ligonier/>.

### **An Update on the Archaeology Field School at Stroud Mansion**

[Submitted by: Jonathan A. Burns, Juniata College]

The Juniata College undergraduate archaeology field school was conducted at Stroud Mansion in conjunction with the Monroe County Historical Association (MCHA) from June 17 to July 7, 2019 (Figure 1). The partnership materialized from the MCHA's desire to evaluate the potential for below ground cultural resources in the yard of their property at Stroud Mansion (36MR0290), located at 900 Main Street, Stroudsburg, Pennsylvania. Our goal was to assist with the investigations and mitigation of extant cultural resources such as Stroud Mansion's outbuildings, Fort Hamilton (1756-1757), or potentially much older prehistoric Native American occupations. Funded in part by a PHMC Keystone grant, the project serves as a model for efficient collaboration between the non-profit, the state agency, and a private liberal arts college. Nine undergraduate students were trained in basic field methods while excavating test units under the supervision of Professor Jonathan Burns (Juniata College) and two graduate Teaching Assistants, Haley Hoffman (William and Mary College) and Charles Edwards (Indiana University of Pennsylvania).





Figure 1. *The 2019 Juniata College Archaeology Field School Crew at Stroud Mansion.*

The Georgian-style structure, constructed by the town's founder Jacob Stroud in 1795, chronicles several eras of occupation after serving as the founding family's residence (see Appel 1997). The building was used as a tavern from 1837-1852. From 1853 to 1880 the mansion, then managed by the Stroud heirs, was used for unknown purposes. From 1880 to 1889 the structure was occupied by the Reverend Theophilus-Heilig. After standing vacant for two years while under the management of absentee owners, it was purchased by the Everitt family in 1892. In 1920 the property was purchased by the Women's Club of Stroudsburg, and in 1926 it became the headquarters for the MCHA. Although the PHMC marker for Fort Hamilton is located in front of Stroud Mansion, historic accounts place it one-half block north of Stroud Mansion, at the intersection Church Alley and North 9th Street.

In the fall of 2018 preliminary investigations, which entailed the excavation of eight shovel test pits, produced 2,200 artifacts—mostly 19th Century ceramics, but with traces of prehistoric lithic scatters—including a “textbook” Palmer Projectile Point (ca. 9500 to 8500 B.P.). Shovel testing offered a glimpse of the complex and artifact rich deposits that occur over what appear to be in-place outwash deposits. A more complete understanding of the site's stratigraphy came from the field school, where a more expansive excavations revealed convergent aprons of cellar fill, historic structure inte-

riors, and an intact fining-upward sequences of loose cobbles, pebbles, and sands.

During this summer's twenty-day field school project, 24 one-meter test units were placed in blocks of four (each 2 x 2 meters) and excavated to sterile outwash cobbles—some to a depth of 2.4 meters below ground surface. Four of the six blocks revealed foundation remnants that likely date to the earliest phase of construction on the property—likely the original summer kitchen and barn (Figure 2). Two additional test units explored architectural features adjacent to the foundations. Most of the recovered artifacts are early 19th Century ceramics, both English wares like Wedgewood Black Basalt (Figure 3) and domestically produced Philadelphia Slipware. This highly visible archaeological project received copious attention by the regional media as well as praise from PA State Senator Mario Scavella after a site tour (Figure 4).

Several aspects make the project an ideal paring with an archaeological field school, first being the mutually beneficial partnership between MCHA, the PHMC, and Juniata College; second, the complex stratigraphy of the Stroud Mansion property; third, the site's proximity to Colonial-era Fort Hamilton; and fourth, students are involved in the entire project from fieldwork to cataloging and research. It was bound to be an excellent educational experience being the building site of Stroud





Figure 2. Block Exposure of the Stroud Mansion Summer Kitchen Foundation and Interior Floor.



Figure 3. Wedgewood Black Basalt (Developed in 1768)



Figure 4. Senator Mario Scavella and MCHA Executive Director Amy Leiser learn about historic ceramics from Graduate Student Haley Hoffman.

Mansion in 1795—no doubt, the possibility for activity area spillover from the fort would have been a highly prized bonus. The project was successful in documenting the earliest historic occupation of the property while delivering high-impact experiential learning opportunities for students. During the lab work phase, student technicians will process and catalog the large (approx. 20,000+) data recovery collection amid the 2019/2020 academic year in Juniata College's Cultural

Resource Institute (CRI) lab in Huntingdon, Pennsylvania.

#### References Cited:

Appel, J. C.  
1997 *The Stroud Mansion House: Its Owners and Residents 1795-1920*. Monroe County Historical Association.



## Investigations at Tulpehocken Plantation

[Submitted by David Rue, Rue Environmental LLC]

Tulpehocken Manor is a large 19th-century mansion located along Tulpehocken Creek near Myerstown in Lebanon County, Pennsylvania. The 125-acre tract associated with the mansion is listed on the National Register of Historic Places. Rue Environmental LLC completed Phase I archaeological investigations within the tract for proposed expansion of an aggregate quarry. The author has seldom seen such a concentration of historic and prehistoric resources in one area. The mansion is a quality structure built in the late 19th century. However, a smaller stone building on the property was first built in 1730 from a stone quarry to the southern part of the property. The building had an arched opening through which a millrace flowed (Figure 1). In the 1790s, the Union Canal was constructed through the property, in some cases utilizing the course of Tulpehocken Creek. George Washington was very interested in the project and is known to have stayed twice on the property to observe construction. Rubble from a destroyed canal lock was observed. In areas where the

canal prism did not follow the stream, remnants are visible.

In the 19th century dolomite and limestone was mined on the property and transported out via the canal. A small hamlet of Italian quarrymen assisted in the activities in the 19th century. Testing identified domestic artifacts associated with a dwelling that was used by one of the quarrymen families. Elsewhere, the probable smithy location was identified, including numerous slag and metal fragments in a midden in context.

A series of prehistoric occupation areas was also noted across the property, in some cases overlapping the historic resources. The sites encountered include 36LE0279 and 36LE0555-0559. Projectile points suggest Late Archaic, Transitional, Early Woodland, and Late Woodland occupations. Many of the artifacts were made of jasper, obtained from sources located ca. 35 miles to the northeast. One of the prehistoric habitation sites (36LE0555) contained an intact soil stratum located beneath the same historic midden noted at the smithy site discussed above.



Figure 1. View of Tulpehocken Manor, located near Myerstown in Lebanon County.



**2nd Annual PAC Fall Program: “The Challenges of 20th Century Archaeological Resources”**

[Submitted by Hannah Harvey, Pennsylvania State Historic Preservation Office]

Susquehanna Room, State Museum of Pennsylvania, Harrisburg

Friday, November 8, 2019, 1:30 PM – 4:30 PM

The Pennsylvania Archaeological Council’s 2nd Annual Fall Program will include a series of case studies (listed below) leading into a group discussion about the issues related to the identification, significance, and management of 20th century archaeological resources. A full program and abstracts for this PA SHPO-organized symposium will be sent to members and posted on the website in the near future.

*Twentieth Century Archaeological Sites, the Good, the Not so Good, but not the Ugly* – Ken Basalik, Ph.D. (CHRS Inc)

*“I’ve Been Workin’ on the Railroad” The Archaeology of an Early 20th Century Section House, York County PA* – Joe Baker, Genevieve Everett (White Mountain National Forest)

*You’re Killing Me Smalls: Defining Three Twentieth Century Archaeological Site Types and Research Themes* – Scott Shaffer (PennDOT)

*Education and Collaboration at Camp Michaux (Michaux State Forest, Cumberland County, Pennsylvania)* – Maria Bruno (Dickinson College), Joe Baker

*Management of Cultural Resources: Case Studies in the Allegheny National Forest* – Amanda Rasmussen and Zaakiyah Cua (ANF)

**2020 PAC Symposium: The Archaeology of Blacksmith Shops.** Friday, April 3, 1-5 pm; The Ramada Inn, Ligonier, Pennsylvania [Submitted by: Susanne Haney, PennDOT]

In conjunction with the SPA Annual meeting, the 2020 Pennsylvania Archaeological Council (PAC) Symposium will be held Friday, April 3, at the Ramada Inn in Ligonier, PA. Prior to the Symposium (noon to 1:00 pm) a wrap luncheon buffet will be available for \$17.64 (Includes turkey or chicken wrap, garden salad, potato salad, iced tea/coffee/tea and a dessert. You will pay the hotel on your own that day.) The Symposium this year will be a workshop: The Archaeology of Blacksmith Shops. The workshop is part of the FHWA/PennDOT’s mitigation commitments for the adverse effect to 36IN463 McQuilkin Blacksmith Shop in Indiana County, Pennsylvania.

The workshop will consist of an introductory presentation by archaeologists from the Markosky Engineering Group Inc. followed by a tour of the Compass Inn Museum in nearby Laughlintown. There will be a special blacksmith demonstration with a focus on what to look for at these types of sites and what can be learned from them. A shuttle from/to the Ramada Inn will be provided (donations to defray cost will be accepted). The entrance fee to the museum is \$10.00. This can be paid in advance through the SPA Annual Meeting registration (via PayPal on the SPA website) or can be paid that day.



*Early 20th-century blacksmith shop in Reynoldston, NY (Reynoldston Research and Studies 2011).*

## Maryland

Reported by: Silas D. Hurry

### St. Mary's City

Historic St. Mary's City is pleased to announce the receipt of three awards this year. The first of these was a Maryland Preservation Award from the Maryland Historical Trust for Excellence in Public Programming for a special **Adults Only Tour**. This tour, while informed by archaeology, is primarily based on 17th century historical records which detail the seamy-side of the colonial experience. The tour occurs at the recreated Godiah Spray plantation and features our costumed staff. The second award was given to the Historic St. Mary's City Foundation and Silas Hurry by the St. Mary's County Commission for Historic Preservation for the publication of a volume entitled "*Our towne we call St. Maries: Fifty years of Archaeology at Maryland's First Capital*". This small, popular book is lavishly illustrated and surveys a number of the archaeological initiatives undertaken in St. Mary's City since the museum's founding in 1967. The final award was from **Preservation Maryland** for the exhibit *The Struggle for Freedom: African American Life in St. Mary's City in the 19th and 20th Centuries Historic St. Mary's City*. The museum received Community Choice Award for their preservation and education efforts. The new exhibit examines how one building stood as witness to over one hundred years of change, first as a quarter for the enslaved, then after Emancipation as a single family home, and finally as the residence of the Milburn family in the mid-20th century whose memories of living there fill the story with a true human touch.

### Crownsville

Matt McKnight has been promoted to Chief Archeologist at the Maryland Historical Trust (MHT), the position previously held by Dennis Curry, who retired in late 2017. After graduating from Southeast Missouri State University with a Bachelor's degree in Anthropology and a minor in Historic Preservation, Matt went on to get his MA and PhD degrees from Penn State University. Matt joined MHT in 2007 as a research archeologist; in this capacity, he was responsible for the Archeological Synthesis Project, handling the monumental task of analyzing every Phase II and Phase III report in MHT's library. Since 2013, he has continued to undertake additional responsibilities relating to survey and GIS collection, overseeing non-capital grants related to archaeology, conducting research and fieldwork, and providing technical assistance to staff and our constituents. As Chief, Matt will have overall

direction of the MHT Archeology Program and will lead archaeology staff detailed to MHT's various offices, as well as coordinating activities with the MAC Lab and external customers.



Matt McKnight

## Virginia

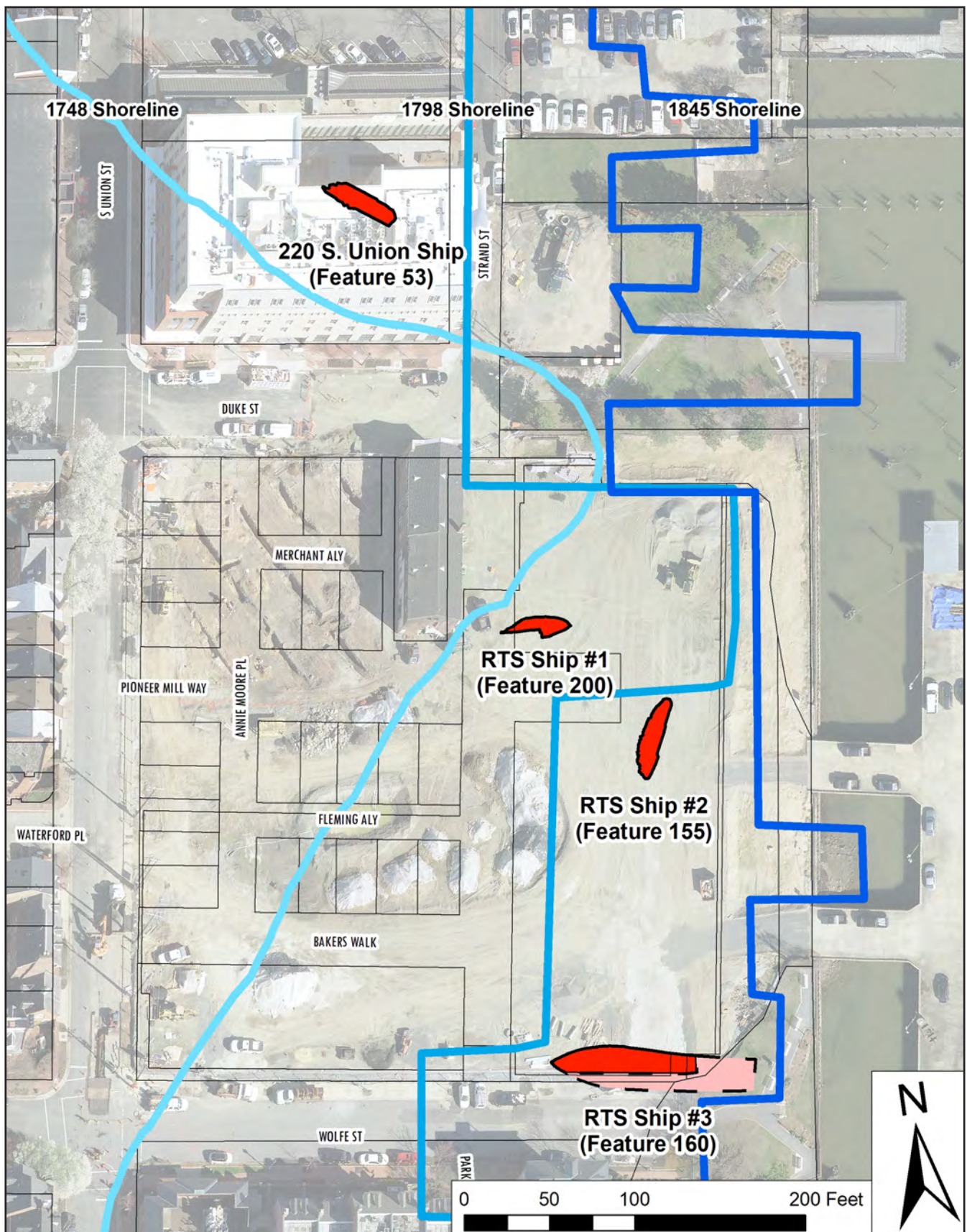
Reported by: Laura E. Masur

### Four Ships, Three Years, Two Blocks: Managing Alexandria's Derelict Merchant Fleet

[Submitted by Tatiana Niculescu, Archaeologist, Office of Historic Alexandria-Alexandria Archaeology]

Alexandria, Virginia, grew up around Hugh West's 1732 tobacco warehouse located on the high bluffs above the Potomac River. Formally established in 1749, the town became an important regional center by the late 18th century. It was a major port of entry for vessels, goods and people from around the world and exported agricultural products like flour and hemp from the Virginia heartland. Some of these ships never left Alexandria, becoming literally woven into the fabric of the city's waterfront through a process locally called "banking out." Early Alexandrians extended their waterfront lots to reach deeper water by making new land using a combination of soil, timber bulkhead wharves,





*This map shows the location of the four historic ships found during redevelopment of the city's waterfront. Also included are historic shorelines from 1748, 1798, and 1845 showing how early Alexandrians created land.  
(Credit: Alexandria Archaeology)*



and occasionally derelict ships. Due to the city's unique Archaeological Protection Code and recent large-scale development along the waterfront, tangible evidence of this process is coming to light, including four historic ships and numerous wharves and other land-making structures. Documenting, removing, stabilizing, and conserving these artifacts has been a massive undertaking that has required the dedicated efforts of developers, contract archaeology crews, city staff from multiple departments, and a variety of other specialists. Nearly four years after the excavation of the first ship, this piece reflects on both the triumphs and challenges of managing such a large-scale, water-logged collection and outlines our plans and vision for the future.

In December 2015, archaeologists from Thunderbird Archeology unearthed what looked like a possible ship at the Hotel Indigo Site (44AX229). Further exploration confirmed that it was indeed a ship (or actually

half a ship). In January 2016 a team of city archaeologists and other staff members, Thunderbird archaeologists, conservators from the Maryland Archaeological Conservation Lab, and the Naval Heritage and History Command excavated the vessel's remains. The archaeologically-recovered remains, now disarticulated, measured about 46.5 feet long by 12.5 feet wide. The frames (or ribs) of the ship were intentionally sawn along the keel.

Excavating a ship is only the first step in a much larger project. Once excavated, it was transported to and stored at a city facility in tanks of water to prevent further deterioration of the waterlogged wood. In June 2017, a team of city archaeologists and volunteers packed the remains and shipped them to Texas A&M University's Conservation Research Lab (CRL) for documentation and conservation. The CRL 3D laser scanned each timber and from the half a ship recovered, reconstructed the lines of the full vessel. This ship was likely about 70 feet long and had a maximum beam of about 18.5 feet. Its form best matches that of a brig or large sloop, fitting well with the lines of Brig #38 of Plate XXVI in F.H. Chapman's *Architectura Navalis Mercatoria* 1768 (Grieco 2019). The relatively flat floors and full hull shape, capable of holding a fair amount of cargo, suggest a merchant vessel. Dendrochronology samples collected from this vessel indicate that it was constructed with timber felled sometime after 1741 in Massachusetts (Worthington and Seiter 2016: 8). Historic maps suggest that the area where this ship was found was filled in by the 1790s.

After the excitement surrounding the Hotel Indigo Site ship, it was hard to imagine that there would be another equally exciting find along the waterfront so soon. However, March 2018 saw the discovery of not one but three more historic ship remnants, uncovered during work at the Robinson Terminal South Site (44AX235). These ship remnants also appear to have been used to make land. Yet again a team of city staff, Thunderbird archaeologists, and the MAC Lab worked to document and excavate these remains.

Like the Hotel Indigo Site ship before it went to Texas, these remains are stored in tanks of water at a city facility. Over 1000 timbers are stored in nine swimming pools and roll off tanks. Since April 2018, city archaeologists, volunteers, and interns have spent nearly 500 person hours tending to the ongoing preservation needs of these artifacts. Staff change the water in the tanks once a month to keep biological growth like algae and mold at bay. We've encountered some unique challenges since these ship remains are not slated for immediate conservation. Due to these circumstances, many of the traditional ways conservators abate biological growth on waterlogged wood (i.e., Biocides) are not an option



*Bow view of the completed 3D printed and metal model of the Hotel Indigo Site ship. This model will serve as the focal point of a new exhibit in our museum.*  
(Credit: Glenn Greico, TAMU CRL)



*City staff and volunteers organize and clean timbers ahead of digital documentation  
(Credit: Alexandria Archaeology)*

for us. Instead we have had to use more time-intensive procedures to treat mold, mildew and algae, including scrubbing and spot treating the timbers.

The future of Alexandria's derelict merchant fleet and its interpretation is promising. A 1:12 scale model of the Hotel Indigo Site ship comprised of 3D printed timber remnants and an extrapolated wire frame hull arrived in December 2018. This model will serve as the centerpiece of a new exhibit at our museum, set to open in October. The ship remains found at the Hotel Indigo Site are undergoing conservation treatment at the CRL and will be ready to return to Alexandria in a few years. This amazing artifact will require a dedicated exhibit or storage space and extensive interpretation weaving in the other objects found at the site. Finding an appropriate location in a city as densely populated as Alexandria is a challenge that will be overcome through community engagement. This fall, CRL in coordination with Alexandria Archaeology are embarking on an ambitious project to digitally document, reconstruct, and model the remains found at the Robinson Terminal South site for future preservation and interpretation.

## References Cited

- Grieco, Glenn  
2019 *The Model Reconstruction and Presentation of the Indigo Wreck, Alexandria, Virginia*. Report prepared for Alexandria Archaeology by the Center for Maritime Archaeology and Conservation Ship Model Lab, Texas A&M University, College Station, Texas.
- Worthington, Michael J. and Jane I. Seiter  
2016 *The Tree-Ring Dating of the Alexandria Shipwreck and Wharf, Alexandria, Virginia*. Report prepared for Thunderbird Archeology by Oxford Tree-Ring Laboratory, of Baltimore, Maryland.



## Atlantic Canada

Reported by: Amanda Crompton

### Avertok Archaeology Project, 2018

[Submitted by: Lisa K. Rankin, Deirdre Elliott, Laura Kelvin, Maria Lear, and Jacinda Sinclair (Memorial University)]

In 2018, the Avertok Archaeology Project [AAP] continued its investigations into the history and archaeology of the Inuit community of Hopedale, Labrador. The research was initiated by the Inuit Community Government of Hopedale, Nunatsiavut, in 2017 and it is undertaken with the support of the *Tradition and Transition: Piusitukaujuik Asianguvalliiajuillu* research partnership between Memorial University and the Nunatsiavut Government. The project encompasses many sub-projects and the research and field work in 2018 had several aims: 1) to develop a community archive of relevant archaeology which can be used by local stakeholders as well as facilitate traditional knowledge transfer between youth and Elders in Hopedale, Labrador; 2) to undertake a ground-penetrating radar (GPR) survey of the Moravian Cemetery in Hopedale to identify the locations of all graves, enabling the community to properly mark and care for the cemetery; 3) to locate, excavate, and learn more about the original Inuit settlement of Avertok (Agvituk, Arvertok) (GiCb-01) which underlies the present Hopedale community (Figure 1); and 4) investigate other nearby Inuit sites to interpret the settlement of the Hopedale region. The 2018 field

crew included Lisa Rankin (project lead), Deirdre Elliott, Laura Kelvin, Maria Lear, Jacinda Sinclair, Robin Fleming, and Nancy Butler from Memorial University; Graham Hyslop from the University of Western Ontario; and Mads Nielsen from the University of Copenhagen. Hopedale community members working on the team included Denver Edmunds, Nicholas Flowers, Halle Lucy, and John Piercy.

### Community Archive and Knowledge Transfer

Laura Kelvin continued work on her postdoctoral research project, the Avertok Archaeology Digital Archive Project, which aims to develop a community archive of archaeological and traditional knowledge of the Hopedale area. In preparation for the 2018 field season, Kelvin visited the Robert S. Peabody Institute for Archaeology web site, the Rooms Museum and Archives, the American Natural History Museum, the Chicago Field Museum, and the British Museum to photograph and create digital 3D models of artifacts recovered from Avertok and the surrounding area. During the 2018 field season, Kelvin worked with four local youth from Hopedale: Denver Edmunds, Nicholas Flowers, Halle Lucy, and John Piercy. The youth developed research questions pertaining to some of the artifacts housed in museums and under the guidance of Kelvin, interviewed Elders, community knowledge holders, and archaeologists to learn more about these artifacts and activities associated with them. The team also surveyed nearby archaeological sites where many of the artifacts were originally recovered. To disseminate

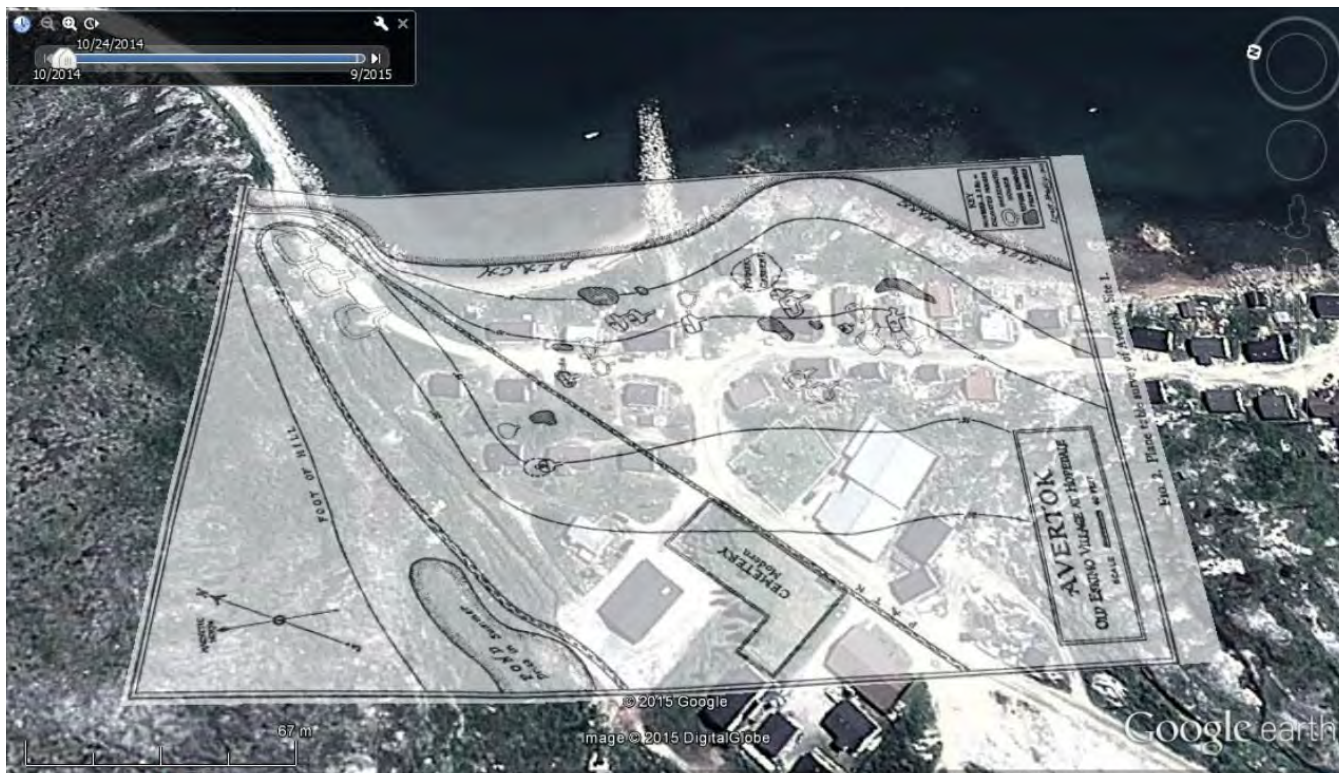


Figure 1. 1934 map of the village of Avertok (by Junius Bird) overlain by contemporary Google Earth image



nate their work, they created a series of videos that can be found on the Avertok Archaeology Project's YouTube page. The photographs, 3D models of artifacts, interviews, and videos will be part of the community archive.

Community outreach is at the center of the Avertok Archaeology Project. To disseminate AAP research findings to the community, Kelvin maintained the Avertok Archaeology Project Facebook page and Instagram account. Social media provided community members with regular updates on our research activities. These accounts will be maintained throughout the winter to update community members on our research. The students also wrote stories about their work for the Tradition and Transition website and the December 2018 issue of *Them Days Magazine* and hosted the Hopedale Literacy Camp for an afternoon to teach them about archaeology. Additionally, at the end of the field season we held a community meeting to meet community members, give presentations about our research, and display some of the artifacts recovered this season.

### **Ground Penetrating Radar Survey**

Maria Lear lead the 2018 ground-penetrating radar survey (GPR) which was undertaken to complete work started in the Hopedale Moravian Cemetery in July 2017 (Figure 2). The 2018 survey work added a significant amount of data to the 2017 research and aimed to establish the locations of unmarked graves within the full extent of the cemetery. Additionally, all visible headstones were photographed and transcribed, and a full total station survey of the GPR grids, complete with the locations of all individually-numbered headstones, was completed.

Ground Penetrating Radar (GPR) is a non-destructive survey technique that uses a radar antenna to identify matrix contrasts and materials (natural and archaeological) in the immediate subsurface. With particular reference to historic cemeteries, it is important to note that the nature of buried organic remains is complex, and sometimes GPR data will not show positive contrasting results (even in areas where there are known burials). It is crucial to undertake such surveys with this expectation. The size of the Moravian cemetery in Hopedale is approximately 60m x 40m. It is locat-



Figure 2. Site location of Moravian Cemetery (GoogleEarth, 2013)

ed near the shoreline, flanked to the south by a high, natural rock outcrop. Due to the size, eight separate grids were established across the cemetery to facilitate full GPR survey coverage. The grids varied in size, but all included transects spaced at 0.25m to allow full coverage along the X & Y axis. The 500MHz antenna recorded a depth of radio signal penetration typical of historic burials as well as providing good data resolution & target identification (Figures 3 and 4). Each grid was surveyed by three people (two student assistants and the GPR operator). Full processing of GPR data is ongoing within the Archaeological Remote Sensing & Digital Lab of the Department of Archaeology, Memorial University.

### ***Continued Archaeological Investigation of Avertok***

Between the 16th and 18th centuries, Avertok, the original Inuit settlement which underlies the modern village of Hopedale, held a significant role in the Labrador Inuit coastal trade networks. The site's name, which translates to English as "the place of whales," points to this connection and the trade products that made this settlement particularly important. Community inter-

est in Avertok remains strong; signage near the site discusses its history and Hopedale's museum displays many of the recovered artifacts. For nearly 100 years, Avertok has been a subject of archaeological investigation, with the largest and best-known study undertaken by Junius Bird, who excavated nine winter sod-houses in 1934, but it is believed that parts of this original settlement remain unexcavated. Furthermore, the methods used by Bird in 1934 were somewhat less stringent than those of contemporary practice, suggesting that we still have much to learn about this settlement. In performing an archaeological reassessment, the Memorial University team sought to locate remaining parts of the Avertok village and gain new information about Inuit lifeways during this period of emerging interaction between Inuit and Europeans. The 2018 field season was a continuation of the work undertaken by Jacinda Sinclair for her MA research in 2017. As Avertok is located within the boundaries of modern Hopedale, the area has been developed with houses, roads, and utilities, and thus the primary goal is to establish how much of Avertok remains intact. In 2018, Sinclair examined two locations which had been identified as high interest in 2017, but which were not able to be adequately examined at the time. The first was identified as a possible undisturbed midden deposit. Five 1x1m units were excavated down to sterile sand. Many materials collected were consistent with midden finds, but excavation revealed that the location was heavily disturbed. A second location of interest, at the very edge of town,

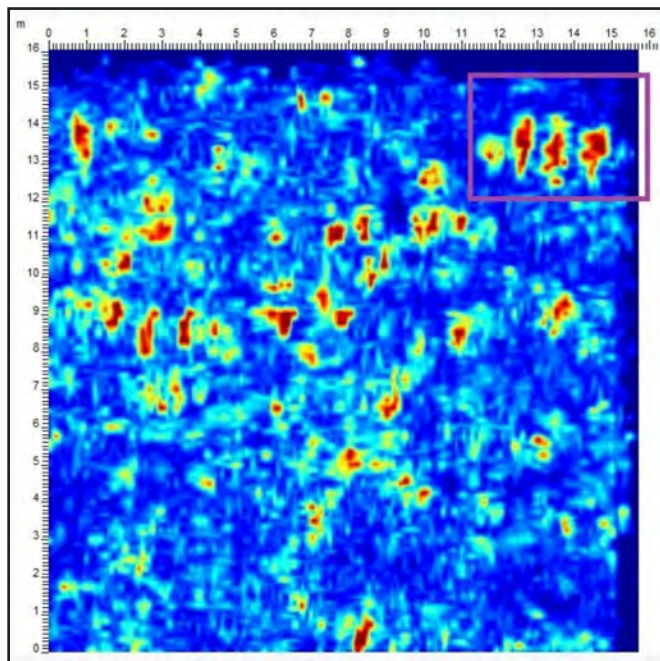


Figure 3. Grid C measured 15m x 15m with survey transect lines spaced at 0.25m. This amplitude slice (a bird's eye view) is from a survey depth of 0.95m-1.0m with north located to the right of the image. Across the entire grid, the red/yellow features depict possible inhumations, based on size & orientation. The sub-oblong shapes are roughly equi-spaced and are generally aligned west-east which would be expected in this type of cemetery. As an example, the purple box to the upper right-hand corner of the amplitude slice, 4 yellow/red features are shown in the reflection profile below which gives another angle from which to view the data.

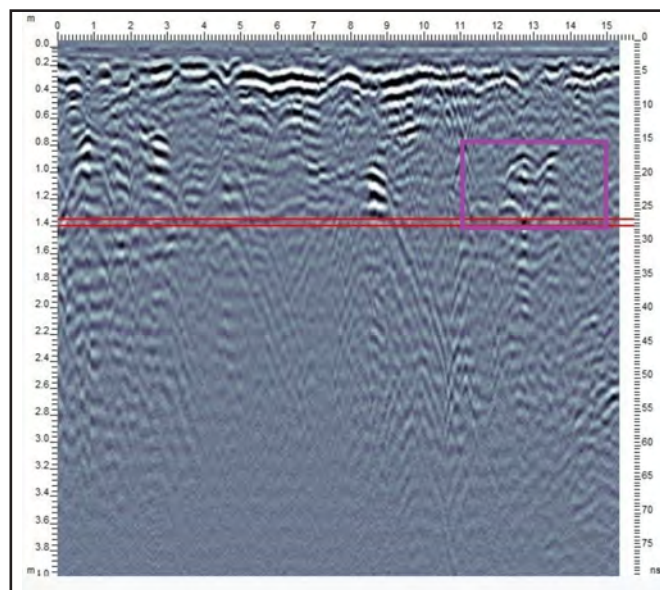


Figure 4. The reflection image is the survey data as collected from moving the GPR antenna from the South-North direction, walking in a straight line directly over the surface of where the 4 features are buried, crossing them at a 90degree angle. The 4 features are the small hyperbolas that appear in the profile from approximately 11.5m – 15.0m along the axis.





Figure 5. *Deirdre Elliott piloting the UAV over sod houses at Napatalik Island. Photo credit: Denver Edmunds.*

was subject to test-pitting. One pit yielded a variety of promising iron and European ceramics, but indicated that this portion of the village had once been heavily impacted by road construction.

### **Regional Settlement**

To complement the excavations at Avertok, and to develop a better picture of broader land use patterns in the Hopedale region, Memorial University PhD student Deirdre Elliott undertook targeted surveys of high potential areas on inner islands surrounding Hopedale, most of which had never been surveyed. After hiring a local boat driver/bear guard (Albert Tuglavina), and with assistance from the Avertok crew members, we completed five days of survey as well as revisits of known Inuit sod house sites. During this time we documented 31 previously unrecorded sites and visited a further eight known sites (including three Inuit sod house sites), for which the records of six were amended to include features not previously recorded. An additional two Inuit sod house site revisits were conducted in conjunction with Laura Kelvin, and supported by driver/bear guard Rueben Flowers, as well as our local students (see above). Wherever possible, aerial and oblique photos of sites were obtained with a small UAV (DJI Mavic Pro Platinum), for the purposes of 3D digital modeling and the creation of high-resolution site maps. While the island location and the coincidence of the survey with seabird nesting season prevented UAV mapping at many of the sites (it was quickly learned that nesting gulls react with extreme hostility to the UAV, even from several hundred metres away), aerial imagery was obtained for three of the six known sod house sites in the region (Figure 5).

The majority of the newly-documented sites consist of variable clusters of stone structures, such as graves, hunting blinds, cairns, storage caches, and, above all

else, tent rings, indicative of warm season occupations. While no subsurface testing was performed at any of these sites to determine date of occupation, their presence on virtually every suitable patch of land attests to the intensive and extensive past land use of the region overall. A goal for future surveys will be to concentrate on Hopedale's most seaward islands which, based on known settlement patterns from elsewhere in Labrador (Kaplan 1983), are high potential areas for relatively early Inuit winter habitation sites, and which are known locally to have remains of past summer habitation sites (Brice-Bennett 1977:196-199).

The support we received from the community of Hopedale ensured we had a wonderful field season, and it helped us plan our goals for 2019. Please check our Facebook page for regular research updates. We would like to thank the Hopedale for making us so welcome. Funding for this project has been provided by the Social Sciences and Research Council of Canada, the Institute of Social and Economic Research, the J.R Smallwood Foundation, Inuit Pathways, Young Canada Works in Heritage, the NL Provincial Archaeology Office and the Northern Scientific Training Program.

### **References Cited:**

- Brice-Bennett, Carol  
1977a *Land Use in the Nain and Hopedale Regions. In Our Footprints are Everywhere: Inuit Land Use and Occupancy in Labrador.* Carol Brice-Bennett, Alan Cooke, and Nina Davis, eds. Pp. 97-204. Nain: Labrador Inuit Association.
- Kaplan, Susan A.  
1983 *Economic and Social Change in Labrador Neo-Eskimo Culture.* PhD dissertation, Department of Anthropology, Bryn Mawr College.



## Archaeology at Fort Saint Louis, Port La Tour

[Submitted by: Dr. K. Cottreau-Robins, Curator of Archaeology (Nova Scotia Museum, Halifax)]

July 2018 marked the second archaeology field season at Fort Saint Louis, a 1620s fortified French fur trade post and National Historic Site in Port La Tour Bay, Shelburne County. Framed as a study of a Mi'kmaq coastal landscape where the French set up a trading post, Fort Saint Louis has to date provided a number of insights and research opportunities that have stimulated further exploration. Planning for Season 3 is under way and it is anticipated that additional fieldwork will resolve some of the outstanding questions about the site such as the extent of the French presence within this particular Mi'kmaq cultural landscape, length of occupation at the post, and the relationship building that took place – both trade and kin - in this period of early contact.

Fort Saint Louis received national status as a historic site in the early twentieth century and entry into the Nova Scotia database of archaeological sites decades ago; however, it was not until recently that archaeological testing and excavation occurred triggered by the possibility of residential development. Though adversely impacted by coastal erosion and storm surge, the fur trade post has been relatively undisturbed since the early seventeenth century. Over the past two years an exceptional collaboration between Nova Scotia Museum, highly-engaged residents, the local community museum, Parks Canada, the Acadian community and local First Nation groups, has generated enthusiasm and interest in the archaeological investigation of the place and how it can clarify local oral tradition about the Fort and the story of Charles de Saint Etienne de la Tour (1593-1666), French trader, Governor of Acadia and founder of the post. There is a tremendous amount to unpack. At a minimum, the narrative includes considerable drama and intrigue with La



Figure 1. *Fort Saint Louis is along a known Mi'kmaq travel route. It sits on an elevated terrace in a sheltered bay in Port la Tour. The vista includes a series of small islands, clam flats and local fresh water creeks. (Image: Nova Scotia Museum)*



Figure 2. *Matt Meuse-Dallien of Bear River First Nation and John A. Campbell of Memorial University of Newfoundland excavate in the West Bastion feature of Fort Saint Louis. (Image: Nova Scotia Museum)*

Tour's archrival Charles de Menou d'Aulnay and the historically described "civil war in Acadia," a three-day armed struggle, a Recollect mission, and a network of relationships that extended beyond La Tour's Mi'kmaq family, friends and alliances to New England, Saint John, New Brunswick and France.

Archaeologically, there is much to analyze and interpret in the landscape of Fort Saint Louis. Two Maritime Woodland components near the beach and across from the site, link the Fort to a locale known and used by the Mi'kmaq for at least 1000 years. There is the interpretation of the elements of the 1620s French fur trade post. Most interesting and significant, especially as the Mi'kmaq engagement and discussion evolves, are the artifacts that inform the relationship between the two groups. This aspect is at the core of the study. Ballast flint worked into Mi'kmaq tools, strips of European copper rolled and folded, an iron spear point, and the variety of European trade beads, all speak to early interactions and exchange. Finally, there are traces of the Basque uncovered in the deepest layers of the midden feature. Do such artifacts link to the time when the Basque and French overlapped in the Atlantic northeast or to an earlier period in New France? Comparative analysis is providing clues. We are excited for Season 3 and for the results of recent Lidar data collection, faunal analysis, radiocarbon dates and ceramic identification.



Figure 3. Thomasina Soucy of Acadia First Nation with a fragment of rolled trade copper, an artifact excavated regularly at the site. (Image: Nova Scotia Museum)

## Modern Archaeology Meets Halifax's Old Burying Ground

[Submitted by: Jonathan Fowler, Vanessa Smith, and Wesley Weatherbee (Saint Mary's University)]

The Old Burying Ground, also known as St. Paul's Cemetery, is the oldest cemetery in Halifax, Nova Scotia. It was established in 1749 – the same year the settlement was founded – and continued in busy operation until the 1840s. The cemetery has undergone several modifications and refurbishments, and in 1991 was declared a national historic site of Canada, the first cemetery in the country so recognized. Canada's Register of Historic Places cites "the rich variety of styles, poignant images and carving skills displayed on its extensive collection of grave markers" as part of the justification for commemoration.

In an effort to assist The Old Burying Ground Foundation in managing and interpreting the site, our project, launched in 2018, is applying modern archaeological methods to the tasks of mapping and recording the cemetery, both above and below ground. In this effort we are building on the work of researchers whose efforts have emphasized historical connections and art-historical interpretations (e.g., Shimabuku and Hall 1981; Trask 2015; Trask 1978). Our project outputs will include a GIS as a tool for resource management and research, and a new website to facilitate public access to information about The Old Burying Ground.

The project's first phase involves a mapping exercise to accurately plot the location of approximately 1200 stones and tabular monuments. For this we are employing a Leica Viva GS14 GNSS antenna, which allows us to rapidly map the stones with sub-centimetre accuracy. The instrument, affectionately dubbed "Her Majesty" because of the imperious digital voice residing within, is generally well suited to the task. We noted an improvement in satellite reception with the loss of leaves at the end of the season, and though Her Majesty remains temperamental at times, we expect to be able to survey most of our points with the GS14 by the end of the season. Any remaining problem areas can be filled in later with the total station.

We also conducted a series of geophysical surveys in the autumn of 2018, employing both electromagnetic induction (EMI) and ground penetrating radar (GPR) techniques. The former, which covered the entire site at 50cm interline spacing, employed the Geonics EM38B in vertical dipole mode, while the latter employed a Noggin 500 by Sensors & Software in a test grid measuring 10 metres square. Even though the GPR survey area was small, with a transect interval of 20cm, it is nonetheless a dense and informative dataset. It shows us, among other things, the course of a disused path no



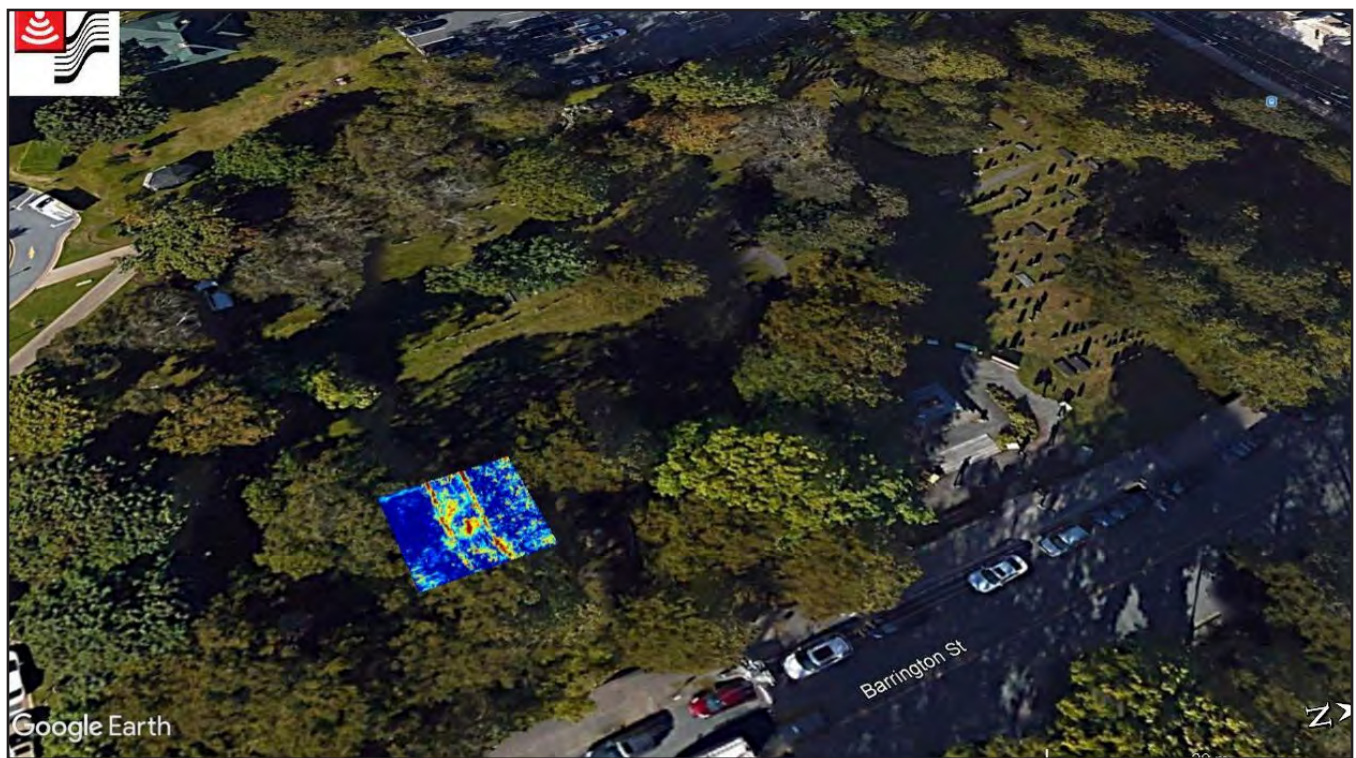


Figure 1. GPR slice map revealing a disused path through the cemetery. Though only superficially buried, this feature is not visible at the surface.

longer visible at the surface (Figure 1). Additional GPR surveys will be scheduled next season.

A notable early result of the extensive EMI survey is a soil map of the site based on variations in ground conductivity (Figure 2). When deployed in vertical dipole mode, the EM38B effectively measures this soil property in milliSiemens per metre to a depth of approximately 1.5m (5 feet) (Clay 2006, 83), but most effectively to less than 1m (Dalan 2006, 177). Because soil conductivity is significantly determined by moisture content, which is itself significantly a by-product of soil particle size, electrical conductivity may be interpreted as a proxy for soil type and hydrology. In this case, we see broadly varying (i.e., probably naturally determined) changes in soil conductivity ranging between about 5 and 17 milliSiemens per metre, consistent with a mixed/loam soil (Clay 2016: 83).

Another component of the project has been to digitize an archive of older, medium format black and white negatives, transferring this significant body of data into a more accessible format. In 1984, in advance of the last major refurbishment of the cemetery, the Old Burying Ground Foundation commissioned photographer Kathleen Flanagan to conduct a comprehensive photographic survey of the site's extant monuments. The photography was linked to the production of a large-scale site map, with each monument assigned a unique reference number. This comprehensive photographic

archive, comprised of approximately 2500 negatives, constitutes a valuable heritage resource and is itself an artifact. The images capture demographic, genealogical and stylistic information that has degraded or disappeared in the intervening decades and represent a visual condition report of the cemetery as it was in 1984.

To date, 70% of the archive has been completed. As we work through the lengthy process of scanning and post-processing, we are starting to see the anticipated progression of death's heads, cherubs, draped urns, and willows so artfully discussed by Dethlefsen and Deetz (1966, 1977). The images are also revealing the shift from headstones imported from New England to regional carving traditions and choices, as well as giving voice to local stories of conflict, disease, loss, and murder.

In addition to digitization, we are working with Nova Scotia Museum curators to locate and photograph an array of gravestone fragments from the Old Burying Ground housed in their collections, to round out and update the corpus of gravestone imagery from the cemetery. These digital images will contribute an important visual element to a GIS planned for the cemetery. Together with the demographic information clearly legible in the older photographs and the highly accurate mapping generated by the GNSS survey, this geospatial database will offer a robust and highly informative research tool for historians, archaeologists, and gene-



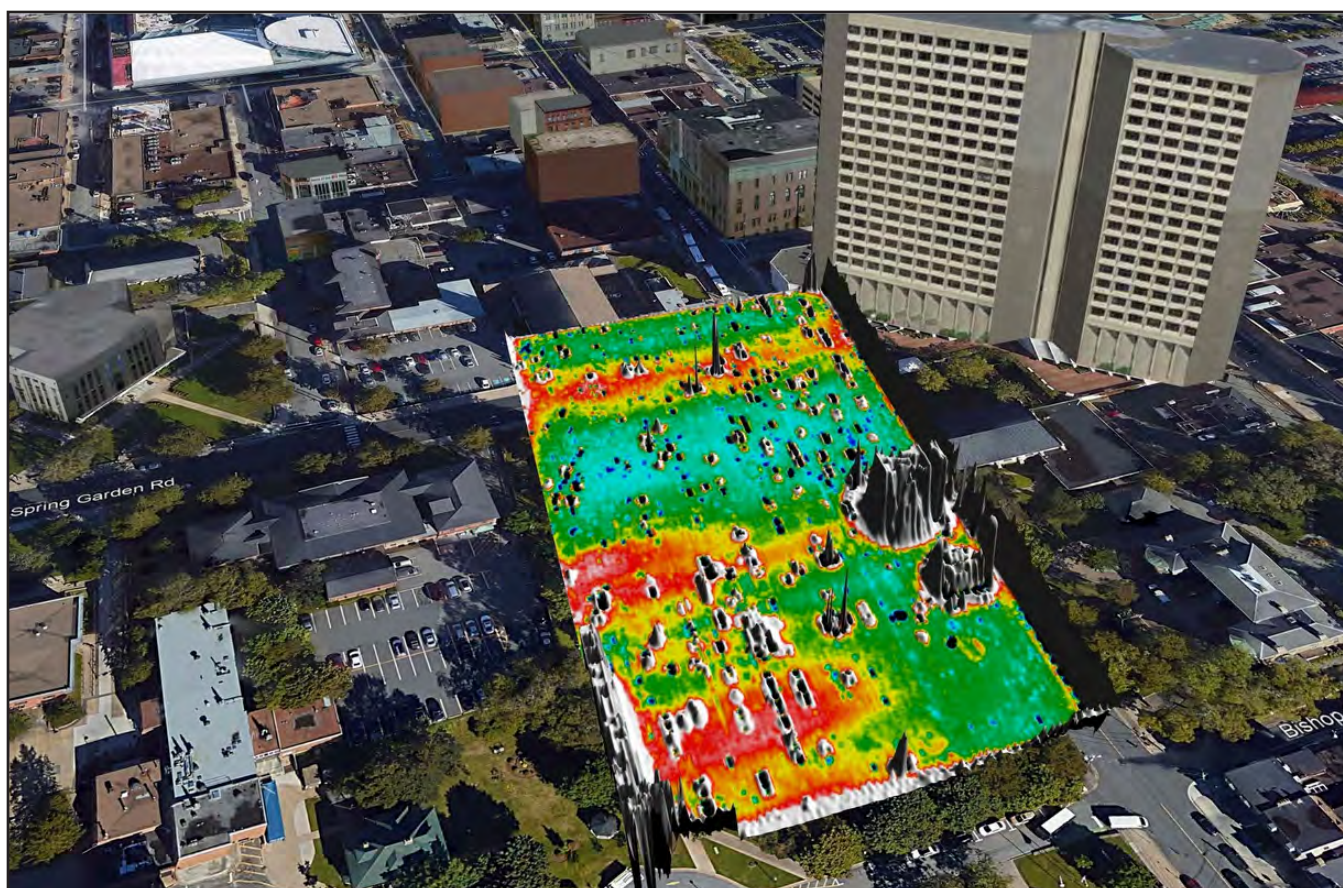


Figure 2. *Soil conductivity map showing natural soil changes in the cemetery. Localized spikes in the data are mostly attributable to the iron fence bordering the property, iron elements in some of the monuments, and lead flashing used to conserve several of the stones.*

alogists seeking to better understand the Old Burying Ground and its residents.

Taking this work one step further, we are employing digital photogrammetry as a means of rendering 3D models of the stones for analysis and interpretation using the structure from motion software, Agisoft Photoscan. Structure from motion software is rapidly becoming a part of the modern archaeological toolkit for documenting, mapping, analyzing, and presenting heritage resources (Chibunichev et al. 2018; Howland et al. 2014). The Old Burying Ground is well-suited to the application of digital photogrammetry to produce a versatile digital record of heritage monuments in their current state of preservation.

Photography collection methodologies for documenting stones vary with the level of detail required. 3D models intended for presentation are produced using relatively small numbers of digital photographs taken in sequence in 360 degrees around the monument. A model of the headstone of John and Jane Conway uses only 27 photographs captured with a Samsung Galaxy Note 9 and was processed in only 5 minutes and 31 seconds using low-quality settings at sparse and dense point cloud

generation, mesh generation, and texture mapping stages (Figure 3). The number of photographs needed to obtain the degree of overlap required for this 3D model was low because the monument fits within the frame of the photographs.

Producing 3D models for detailed analysis requires more photographs, as do cases with heavily weathered epigraphy, which necessitate capturing photographs closer to the monument. French researchers have recently investigated the application of digital photogrammetry to visualize highly weathered epigraphy with promising results (Samaan et al. 2016). To refine our methodology for recording subtle epigraphic details, DSLR cameras will be used to capture the photographs, and the camera will be calibrated using Agisoft Lens. The large file sizes and high-end hardware necessary to visualize the higher resolution 3D models make these products less accessible overall, and therefore justifies the expedient production of lower quality models for general documentation and presentation. Our future endeavours will employ this methodology in hopes of recovering lost inscriptions at the site. By bringing some of archaeology's modern toolkit to the site, we hope this multi-year project will not only assist



Figure 3. An image of a digital photogrammetry derived 3D model, showing the grave marker of John and Jane Conway, located in the Old Burying Ground.

community members in managing the cultural resource but will also allow this remarkable place and its many stories to be better shared with the broader public.

#### References Cited:

Chibunichev, A. G., Knyaz, V. A., Knyaz, V. A., Zhuravlev, D. V., and V. M. Kurkov  
2018 Photogrammetry for Archaeology: Collecting Pieces Together. *The International Archives of the Photogrammetry, Remote Sensing and Spatial Information Sciences* XLII-2: 235-40.

Clay, R. Berle  
2006 Conductivity Survey: A Survival Manual, in Johnson, Jay K. (ed.) *Remote Sensing in Archaeology: An Explicitly North American Perspective*. Tuscaloosa, Alabama: University of Alabama Press, pp. 79-107.

Dalan, Rinita A.  
2006 Magnetic Susceptibility, in Johnson, Jay K. (ed.) *Remote Sensing in Archaeology: An Explicitly North American Perspective*. Tuscaloosa, Alabama: University of Alabama Press, pp. 161-203.

Dethlefsen, Edwin, and Deetz, James  
1966 Death's Heads, Cherubs, and Willow Trees: Experimental Archaeology in Colonial Cemeteries. *American Antiquity*, Vol. 31(4): 502-510.

Deetz, James  
1977 *In Small Things Forgotten*. New York: Anchor Press.

Howland, Matthew D., Kuester, Falko, and Thomas E. Levy  
2014 Structure from Motion: Twenty-First Century Field Recording with 3D Technology. *Near Eastern Archaeology*, Vol. 77(3): 187-91.  
<https://doi.org/10.5615/neareastarch.77.3.0187>.

Samaan, Mariam, Deseilligny, Marc Pierrot, Heno, Raphaële, De La Vaissière, Etienne, and Jacques Roger  
2016 Close-Range Photogrammetric Tools for Epigraphic Surveys. *Journal on Computing and Cultural Heritage (JOCCH)*, Vol. 9(3): 16.  
<https://doi.org/10.1145/2966985>.

Shimabuku, Daniel M. and Gary F. Hall  
1981 St. Paul's Cemetery Halifax, Nova Scotia, Canada: Description and Interpretation of Gravestone Designs and Epitaphs. *Occasional Papers in Anthropology* no. 10. Halifax, NS: Anthropology Department, Saint Mary's University.

Trask, Deborah  
2015 Putting the War of 1812 to Rest. *Journal of the Royal Nova Scotia Historical Society*, Vol. 18: 49-64.

Trask, Deborah  
1978 *Life How Short, Eternity How Long: Gravestone Carving and Carvers in Nova Scotia*. Halifax: Nova Scotia Museum.





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The last printed edition of the Newsletter was October 2015 Newsletter (No. 92). In an effort to maintain current membership rates, the Board has voted to transition all subsequent newsletters to an electronic format that will be sent to all members via email.

Le bulletin (no. 92), celui du mois d'octobre dernier, aura été le dernier numéro imprimé. Afin de maintenir les taux d'abonnements actuels, l'exécutif a voté en faveur d'un format électronique pour les bulletins. Tous les bulletins seront donc envoyés aux membres par courriel à l'avenir.

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