

Society for Pennsylvania Archaeology 94th Annual Meeting

Revealing the past, embracing the future

Comfort Suites, Dubois, Pennsylvania

April 11 - 13, 2025

Tentative Annual Meeting at a Glance – Subject to Change

Friday April 11, 2025

1:30 PM – 5:00 PM Registration

Pennsylvania Archaeological Council (PAC)

9:30 AM – 12:00 PM PAC Business Meeting

12:00 PM – 1:30 PM Lunch

1:30 PM – 4:30 PM Roundtable Discussion on the Development of a PAC/SPA Archaeological Training Program

7:00 PM – 9:00 PM PAC CRM Expo

Society for Pennsylvania Archaeology (SPA)

Friday evening April 11, 2025

5:00 PM – 6:00 PM SPA Committee Meetings

6:00 PM – 8:00 PM SPA Board of Directors Meeting

8:00 PM – Midnight Hospitality Suite open

Saturday morning and afternoon April 12, 2025

8:00 AM – 8:55 AM SPA Business Meeting

8:00 AM – 2:00 PM Registration

9:00 AM – 4:00 PM Book room open

9:00 AM – 4:00 PM Silent auction display

9:00 AM – 4:00 PM Student poster displays

9:00 AM – 12:05 PM Morning paper sessions

1:30 PM – 2:50 PM Afternoon paper session

3:00 PM – 5:00 PM Student poster session

Saturday evening April 12, 2025

6:00 PM – 6:30 PM Cash bar

6:30 PM – 7:30 PM SPA banquet

7:30 PM – 8:00 PM SPA awards

8:00 PM – 9:00 PM Banquet presentation: **Western Pennsylvania Petroglyph Project**. Ken Burkett and Brian Fritz

9:00 PM – 10:00 PM Auction

10:00 PM – Midnight Hospitality Suite open

Sunday morning April 13, 2025

9:00 AM – Noon Morning paper sessions

Paper and Poster Abstracts

Society for Pennsylvania Archaeology 94th Annual Meeting

April 11-13, 2025, Dubois, Pennsylvania

Pennsylvania Archaeology: revealing the past, embracing the future

2025 Paper abstracts

The Pone Lane Rock Shelter

William Black and Daniel Kearney, Society for Pennsylvania Archaeology

The Pone Lane Rock Shelter (36-VE-333) was treated by the authors as a salvage excavation based on a survey of the nearly one-mile-long shelf of “raked-out” rock overhangs and neighborhood children’s stories. The unexpected recovery of pottery sherds from two Half-Moon Cord Marked grit-tempered flat bottom pots, chipped stone tools, and debitage suggests the overhang escaped “pot-hunting” detection. Analysis of these artifacts including Thermoluminescence and AMS dating points to an improved understanding of Early Woodland occupations in Venango County and western Pennsylvania.

Western Pennsylvania Petroglyph Project (evening banquet presentation)

Ken Burkett and Brian Fritz, Jefferson County History Center and Quemahoning LLC

Only a few special places remain in western Pennsylvania, where evidence of prehistoric activities can be found as part of the undisturbed natural landscape. Among these are petroglyphs engraved on rocks created many years ago by Native Americans. These images of humans, fish, birds, animals, and mythological figures provide a rare insight into the thoughts and beliefs of these vanished peoples. During the past several years, a small team of archaeologists have been working on a multi-year project utilizing a Keystone grant from the Pennsylvania State Historic Preservation Office to resurvey and record the known prehistoric petroglyph sites throughout the upper Ohio River region in western Pennsylvania. This project has yielded the most comprehensive visual documentation of these locations ever recorded by applying cutting-edge photographic and other recording techniques. This presentation will include an overview of the discoveries and provide unique insight into this area's prehistoric past.

Isotopic Insights into the Search for the Sideling Hill and “Friendly Fire Incident” Battlefields

Jonathan Burns and Ryan Mathur, Juniata College

Surveys carried out during two Veterans Archaeology Program projects at French and Indian War battlefields have produced lead assemblages that comprise the core material evidence of these heretofore undiscovered fields of conflict. Lead Isotope Analysis (LIA) has the potential to contribute to the interpretation of lead artifacts recovered at eighteenth century fortifications, encampments, and battlefields with broader implications for munition distribution networks. Lead isotope ratios were measured using a Neptune ICP-MS to identify geographically distinct mining regions responsible for the distribution of lead in colonial North America—specifically in Pennsylvania where the ranges of New France and Great Britain overlapped. This analysis reveals isotopic signatures of three distinct geographic

sources—Europe, Missouri, and Quebec. The distinct isotopic signatures of mapped lead ammunition add an important line of evidence to the forensic analysis of hallowed ground.

The Unami Creek Open Site (36BU0445)

Luka Eglesia and Kristopher Montgomery, AECOM

In the spring and summer of 2019, AECOM conducted a Phase III data recovery at the Unami Creek Open Site (36BU0445), located in Milford Township, Bucks County. The site lies on the T-1 and T-2 terraces on the west bank of the Unami Creek, north of the confluence of Unami Creek and Butter Creek.

Excavations identified 39 pre-contact features, including hearths, post molds, pit features, and a precontact living surface. Over 90,000 pre-contact artifacts were recovered, including a green monochrome glass bead recovered from the buried pre-contact living surface. Diagnostic artifacts and radiocarbon dating suggest the site was occupied from the Early Archaic Period through the Contact Period. This paper presents a summary of data recovery effort and results.

How Buried Soil Horizons Form, and Their Importance to Archaeology

Brian L. Fritz, Quemahoning LLC

Buried A horizons are easily recognized in soil profiles exposed by archaeological excavations. They are commonly found in stream terraces where the accumulation of sediments has been sporadic with long periods of landform stability followed by episodes of rapid deposition. However, many soil profiles within alluvial terraces lack buried A horizons and instead exhibit overthickened B horizons. The competition between sedimentological processes and pedogenic processes controls the types of soil profile features that are formed. This presentation will examine the differing soil forming trajectories that result in buried A horizons and overthickened B horizons and their implications for archaeological interpretations.

Archaeological Data Recovery at the James Harbison Site (36BT505), Butler County, Pennsylvania

Scott D. Heberling, Heberling Associates, Inc.

Recent archaeological and historical investigations at the James Harbison Site (36BT505) in Middlesex Township, Butler County, Pennsylvania, documented the life experience and material culture of one western Pennsylvania farm family from 1864 through the 1920s. Given the lack of agricultural buildings and features within the project limits, the investigated portion of the Harbison Site essentially was a late 19th/early 20th century rural domestic site containing a house and surrounding yard area. Despite extensive 1930s-era demolition-related disturbance, it was possible to detect horizontal artifact patterning, define outdoor activity areas, and document changing consumer choices over time. Artifact analyses explored issues related to household economy and consumption patterns as reflections of the internal dynamics and developmental cycle of the Harbison family.

Lost Faces in Time: The Mysterious Disappearance of Pre-Contact Susquehanna Cultures

James T. Herbstritt, Section of Archaeology, The State Museum of Pennsylvania

Prior to direct European contact, the indigenous landscape in the Northern Piedmont and Great Valley sections of the Susquehanna valley, underwent a major change. Among the many groups affected were

people of the Shenks Ferry and Luray cultural traditions of the mid-16th century. Proxy data acquired through various sources best explaining these changes are detailed in the presentation.

Digging into Archaeology at DCNR: Updates on Ongoing Exploratory Investigations, Partnerships, and Guidance on Research Agreements

Angela Jaillet-Wentling, Pennsylvania Department of Conservation and Natural Resources

Join Pennsylvania Department of Conservation and Natural Resources (PA DCNR) Cultural Resources Professional (CRP) to learn more about PA DCNR's archaeological endeavors. Highlights include a review of PA DCNR's ongoing exploratory investigations at two formerly segregated Black Civilian Conservation Corps (CCC) camps at Penn-Roosevelt State Park/Rothrock State Forest and Pymatuning State Park, updates on recent partnerships supporting crew capacity, Untold Stories work, and more with academic and non-profit partners, and recent updates aligning the PA DCNR research agreement process and requirements with the PA State Historic Preservation Office (PA SHPO) archaeological permit.

Archaeology and Law Enforcement

Roger Moeller, Archaeological Services

Students majoring in Anthropology and wanting a career in archaeology need to be aware of the myriad ways to pursue their interests. Sixty years ago, I began as a field archaeologist with an interest in artifact and floral analysis. Different sites brought different interests and techniques in analysis and interpretation. The focus of my interests changed over time with physical traumas and declining health to editing journals. I have applied anthropological and archaeological techniques and theories in many seemingly unrelated fields. One of these is law enforcement consulting.

Historical Oilfields in Pennsylvania

Jack O'Brien, Ohio Valley Chapter 22, Society for Pennsylvania Archaeology

This graphic-rich Industrial Archaeology presentation touches on the long history of oil-based products that ranges back over 10,000 years ago and its use by the Ancients. After this review, the emphasis shifts to the once prolific, and now abandoned, oil fields and artifacts near the ghost town Shamburg in Venango County Pennsylvania. The "discovery" events of 27 August 1859 ignited an oil frenzy and boomtowns sprang up with an oil-culture that followed. Collection methods and transportation advances resulted in instances of sabotage and conflict between the two rival technologies. While the buzz of the new industry circulated, few knew about the new substance's history, or if it had ever been found anywhere before. This presentation briefly examines the development and impact of this oil field endeavor in northwestern Pennsylvania and subsequently its world-wide commercial introduction.

Nuts to You, Mast to Me: The Role of the Nut Harvest at Resource Procurement Sites

Paul A. Raber, Heberling Associates

Nutshell, especially hickory and black walnut nutshell, is frequently found at precontact sites of all types. Results from several recent studies at resource procurement sites in the Upper Ohio and Susquehanna drainages have documented intensive fall season nut harvests, apparently scheduled in tandem with the deer hunt. This paper reports on an initial attempt to compile an inventory of nutshell remains from regional sites.

Hometown History: Utilizing Non-professional Collections to Explore Indigenous Occupational Strategies in Eastern Pennsylvania

Sonja Rossi-Williams, NTM Engineering, Inc.

According to the PHMC, there are 25,000+ archaeological sites recorded across the state of Pennsylvania and in many regions those sites are most commonly reported by non-professional archaeologists. While most modern archeological data is produced by compliance work conducted by cultural resource management (CRM) during testing for proposed improvements, many areas within the state including the sampled region (Watershed 03A: Upper Schuylkill River, Western Branch) are not targeted for such work and as such the majority of data for that region is sourced from non-professionals. The limited publication associated with non-professional collections often results in a reduced understanding of early settlement within these regions, particularly in those periods prior to European Colonization. Publication and data sharing is essential, and the use of data for this project exemplifies how such collections can expand and refine our current understanding of the past.

Rocks, Eddies and Raftsmen: Historic Rock Inscriptions from the Rafting Era of the Clarion River, Northwestern Pennsylvania

Charles E. Williams, Columbia Southern University

The Clarion River in northwestern Pennsylvania was an important rafting and flat-boating river during the 19th and early 20th centuries, sending logs, spars, lumber, and other products to downstream markets for over a century. Despite its historical importance, the archaeological record of the rafting industry on the Clarion River is sparse. I present preliminary results of an on-going survey of historic rock inscriptions along the Clarion River - putative artifacts of the rafting era. Chiseled and pecked letters and numbers, often set amongst iron bolts and rungs, are the primary artifacts found to date, likely associated with mooring sites for rafts and flat boats in eddies. A precisely chiseled river stage gauge was found on a large rock on the lower Clarion River near its confluence with the Allegheny River. Rafts and flat boats were often coupled into "fleets" on the lower Clarion River. Fleet departures may have been coordinated with rising river stage monitored from the gauge.

A Ground-Penetrating Radar Survey of the Camp Security Revolutionary War Prisoner Camp in York County, Pennsylvania

Connor Winslow, Indiana University of Pennsylvania

Camp Security was a Revolutionary War prisoner camp in Springettsbury Township in York County, Pennsylvania, and housed approximately 1,000 prisoners. Shortly after the signing of the Treaty of Paris in 1783, the camp was deconstructed, and the exact standing location was lost. The land has since been used as seasonal farmland. The Camp Security preservation area was purchased in 2013 by the Friends of Camp Security (FOCS) in partnership with the township. In 2022 and 2023, archaeological excavations by FOCS uncovered a parabola-shaped portion of a likely palisade trench feature. The aim of this project was to survey six 20-meter by 20-meter grids using ground-penetrating radar (GPR) to chase the continuation of the likely palisade feature and determine its orientation and extent. Five 2-meter by 1-meter units were also excavated to ground-truth GPR anomalies identified to be contemporaneous with the Camp Security fortification.

Finding Fort Hyndshaw: Background Research and Archaeological Probability Assessment

Danny L. Younger, Lenape Chapter 12, Society for Pennsylvania Archaeology

Owing to an undue reliance upon 'oral history', the 1896 Commission to Locate the Frontier Forts of Pennsylvania misidentified the location of the site commonly known as Hyndshaw's Fort – the *Pennsylvania Archives* place this bastioned French & Indian War fortification at a nearby, but different, locale in Bushkill, PA. Essentially, we seek to find a massacre site (as the fort met its demise on 14 June 1758). Locational clues have come by way of historical mapping, PA Land Office original surveys, Pennsylvania Archaeological Site Survey (PASS) files specific to burial sites, LiDAR imagery, accounts from within the fort commander's daily journal and by way of primary source locational commentary supplied by the Pennsylvania Commissary General of the Muster. As this fort was directly associated with Benjamin Franklin (who personally drafted the organizational orders for the fort's militia unit), we deem the site to be worthy of National Historic Landmark status.

2025 Student poster abstracts

Pennsylvania Watershed Context Statement, 20F Chartiers Creek

Emily Briggs, Indiana University of Pennsylvania

This watershed context statement examines the archaeological and environmental history of the Chartiers Creek Watershed (Watershed 20F) in Southwestern Pennsylvania. The research synthesizes data from PA SHARE, archaeological surveys, and published academic/CRM reports to analyze settlement patterns in the region from the Paleoindian period through the Late Woodland period. The watershed's unique geographical setting on a drainage divide between the Monongahela and Ohio Rivers provides an ideal case for exploring regional occupations and cultural development. Research questions address the temporal distribution of sites, gaps in archaeological data, and an exploration of statistical anomalies within the data. Possible causes and considerations for maintaining data integrity will be discussed. Findings indicate a strong correlation between site distribution and environmental factors such as drainage patterns, upland benches, and lithic resources. Additionally, the study highlights biases in site recording, particularly due to CRM-driven surveys and avocational collections, both of which have influenced PASS file data interpretation heavily in Washington County and more specifically the Chartiers Creek and Little Chartiers Creek watersheds.

Deep Beneath the Surface: A Geophysical and Geomorphic Assessment of the Mary Rinn Archaeological Site

Nate Coughlin, Indiana University of Pennsylvania

The Mary Rinn archaeological site is a Late Woodland village site, radiocarbon dated 850 – 1550 AD in Indiana County, Pennsylvania. However, there is nearly continuous evidence of human habitation within the Cowanshannock-Crooked Creeks watershed between 16,500 and 500 years ago, corresponding with the Paleoindian through Woodland periods in Pennsylvania. The site has shown evidence of stratification through previous studies and excavations. This study is aimed to confirm the evidence of the stratification as well as explore minimally invasive techniques to yield maximum data recovery. The explorations of this study will also strive to understand the potential dynamics of the Crooked Creek drainage. These goals will be achieved by utilizing ground penetrating radar (GPR) to identify potential

buried landscapes to be subsequently verified (i.e., ground truthed). The ground truthing is conducted by hand using a hand operated soil auger. Within the Mary Rinn archaeological site, there has been no recorded testing similar to what this study will do. This study will expand on the current geoarchaeological interpretations of the Mary Rinn site which will provide valuable information for future testing by significantly increasing testing precision and limiting site disturbance.

***Sus scrofa* Decomposition: Analysis of Burial Environmental Influences and PMI Scoring Method Applicability Within a Western Pennsylvania Non-Human Research Facility**

Emma Dickerson, Indiana University of Pennsylvania

Decomposition processes were documented for nine pigs in the understudied region of western Pennsylvania within subsurface and surface contexts. For three intervals of daily, 1 month, and 3 months, remains of stillborn pigs were scored using the Megyesi and Keough decomposition scoring methods to assess the applicability of these scoring methods for subadult remains in this environment. The information gathered is valuable in assisting forensic knowledge in western PA by adding to the decomposition information in an understudied region and understanding the applicability of methods to juvenile remains.

Cultural Context Statement for Watershed 03I of the Lower Delaware Sub-basin: Middle Branch of White Clay Creek, Red Clay Creek, and the Christina River

James Duke, Indiana University of Pennsylvania

This poster intends to describe the environment and Pre-Contact cultural setting of Pennsylvania Watershed 03I of the Lower Delaware River Sub-basin, the Middle Branch of White Clay Creek, Red Clay Creek, and the Christina River. A primary focus of the project was the identification of gaps in previous surveys in the region which may have led to an artificially decreased number of cultural sites within the watershed. PA-Share was used extensively to collect site data on Watershed 03I, and ARCGIS Pro was used to map Pre-Contact sites in the region by temporal period. Potential avenues for further research are presented, the goal of which being a better understanding of the relationship between sites in this region of Pennsylvania and those across the border in Delaware and in Maryland.

Paleoenvironmental Reconstruction at the Squirrel Hill Site (36Wm35)

Tyler Fanell, Indiana University of Pennsylvania

A geomorphologic study of the Squirrel Hill site, a Johnston Phase (AD 1450-1590) Monongahela Tradition site, is the focus of this research. Previous work completed by IUP has documented much of the material culture found at the site. Through previous fieldwork, the northern boundary of the site was extended during the IUP summer archaeological field school in 2022, and a suspected paleochannel was discovered. The presence of an Archaic component beneath the Monongahela Tradition component is believed to be present based on radiocarbon dating of a feature. However, due to the instability of the landform during the Archaic period, the extent of possible site preservation is unknown. This research project aims to use geomorphic and geophysical methods to 1) Confirm the presence of a paleochannel, 2) Study the sediments of the suggested paleochannel to gain insights about water flowrate and channel migration over time, and 3) date the age of the channel to determine its temporal relationship to the Squirrel Hill site. This will be achieved by completing a GPR survey of the suspected paleochannel, as

well as taking geomorphic auger samples, taken both within the extent of the suspected paleochannel and outside of it, and grain size analysis using accepted methodology to determine the environment of deposition.

Rediscovering a Chapel School: Initial Geophysical Investigations at the Basilica of the Sacred Heart of Jesus (Conewago Chapel), Hanover, PA

Elena Frye, Indiana University of Pennsylvania

The Basilica of the Sacred Heart of Jesus is a Catholic Basilica campus in Hanover, PA. Founded as the Conewago Chapel in the 18th century, the current basilica building is the oldest stone Catholic church in the United States and was among the largest in the country at its founding. Over the course of the church's nearly 200-year history, several buildings have been constructed and subsequently demolished on the property, including the original chapel school building. The exact location of this building is not known. This project utilizes a non-invasive geophysical survey, including ground-penetrating radar and magnetic gradiometer surveys, to seek evidence of buried structural remains of the original chapel school building.

From Quarry to Village: Lithic Resource Exploitation in Monongahela Cultural Tradition Johnston Phase Sites

Emma Kinzinger, Indiana University of Pennsylvania

The Monongahela Cultural Tradition (MCT) is a Late Prehistoric cultural manifestation occupying present-day western Pennsylvania, eastern Ohio, and northern West Virginia from approximately A.D. 1050 to 1650. Despite its broad regional and temporal scope, aspects such as village organization and growth through time, trade networks, and cultural interactions and amalgamation remain unclear. This research examines lithic resource use in Middle Monongahela (1250-1590 A.D.) Johnston Phase sites. Previous studies of two Johnston Phase sites, Squirrel Hill and Johnston, found unexpectedly high amounts of non-local material at Squirrel Hill. To expand on these findings, this study will analyze lithic assemblages from two additional Johnston Phase sites. Objectives include: 1) identifying raw materials in these assemblages, 2) comparing them with those from Squirrel Hill and Johnston, and 3) assessing implications for mobility, trade, and social stratification.