

## **BIG ARCHAEOLOGY, SMALL STATE: RECOVERING DELAWARE'S PREHISTORY**

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In front of a Girl Scout troop who recently visited an archaeological excavation on the outskirts of Dover, Diane Halsall remarked that, "Native Americans were in Delaware at least 12,000 years before the arrival of Christopher Columbus". This simple, but factual statement is usually shocking to our audiences, both to children and adults alike. However, most members of the public are simply fascinated to learn that prehistory far precedes our recorded history. Because the public desires to know more about what archaeologists are doing in their own backyards and because they need to know that people formerly occupied the land they now live on for millenia, education has become a major component of archaeological investigations in Delaware.

In the spirit of education about the past, Diane has become a full-time public outreach coordinator for us at our recent Hickory Bluff excavations. As a result of this initiative, thousands of people from all walks of life have come to tour and participate in the dig. Among the tour groups that have visited are school classes of every level, historical and nature societies, retirees, and parents and their children. Girl Scouts and Boy Scout troops, have studied, dug, and screened at the sites, earn badges as a result of their hard work. The children have learned an enormous amount about the mechanics of archaeology by working side by side with professional archaeologists, and they have gained an appreciation that a deeper past exists in Delaware.

For the past twenty years, archaeologists have been uncovering the cultural history of Delaware in advance of road construction. Usually of great surprise to many, federal and state transportation agencies are the number one sponsors of archaeology, routinely hiring professionals to investigate whether any significant cultural resources are in the path of proposed construction. The Delaware Department of Transportation is no exception, having supported hundreds of archaeological surveys and excavations, in the spirit of cultural resource legislation which protects and investigates our collective American heritage. Working hand-in-hand with the State Historic Preservation Office, and the transportation agency's many archaeological consulting firms, literally thousands of prehistoric Native American sites have been located. In many cases, the archaeological sites are either avoided or protected, or in some cases, they are excavated before they are to be impacted by planned construction. As practitioners, we feel proud to be engaged in this work, since 95% of the country's archaeological record is being destroyed on a daily basis without the protection of any laws. Witness your local shopping mall and you will usually quickly see that no archaeologist has reviewed the project.

We are pleased to acknowledge that Delaware, one of the smallest states in the country, has witnessed some of the largest-scale excavations of prehistoric sites, living up to the state's slogan, to archaeologists at least, as the "small wonder". These wide-

sweeping archaeological excavations have been conducted not because they aim to be the biggest, but because we wish to recover as much information as possible about prehistory before it is irreplaceably lost. Additionally, as archaeologists, we aim to study prehistoric activities over wide areas. Ethnographers who have studied living hunters and gatherers or semi-sedentary societies have often documented that single occupations and activities often occur over several acres. Thus, we need to understand how people used space over entire landscapes, and we also wish to examine how sites become larger and more archaeologically complex as peoples occupy places through time.

Among the largest achievements of the last 20 years of road-sponsored projects has been the amassing of chronological information, which irrefutably shows that Native Americans lived in Delaware for more than 12,000 years. The archaeological investigations have provided us with a deeper understanding of variations in settlement throughout the course of prehistory, changing from mobile societies which subsisted on hunted meat and gathered plant resources, to later semi-sedentary groups, which added horticultural foodstuffs to their diet. Differences in the material culture of these groups have also been documented, changing from spear technology in the earliest periods, to adoption of the bow and arrow and pottery in later periods. Thanks to intensive field and research efforts, many gaps have been filled in about the prehistory of the region, and many carefully collected artifacts have accumulated, which are available for future study and exhibits.

The last five to ten years has been an exciting time for unraveling many questions about prehistoric settlement. Major excavations have been carried out by the University of Delaware, uncovering literally thousands of features which were interpreted as “pithouses” by the researchers. The features were called “pithouses” since they appeared to have a dug-out basement and storage pit within the presumed dwellings. Traces of these houses are difficult to discern since none of the superstructure survived, as they were made of decomposed organic material such as bent saplings, wood, bark, and grass. Thus, the only sign that may survive archaeologically are the basements, pits, and associated artifacts. While the recovery of these features is potentially exciting, certain researchers question the “pithouse” interpretation, some arguing that natural and other cultural activities may account for these subsurface features. This is causing current controversy and debate among regional archaeologists, setting up new avenues of analysis and future challenges of interpretation.

Among recently investigated sites, the Lums Pond site is a fine example of the detail at which archaeologists are able to learn about Native American inhabitants. In one part of the site a series of round and discrete silo pits, many filled with artifacts, were uncovered. Carbon was present in the pits, allowing us to apply the radiocarbon dating technique. The dates were all within 50 to 100 years of each other, with an average dating to 850 B.C. Dennis Knepper, Field Director of the Lums Pond site excavation, noted that the overlaps in the dates among the pits likely meant that the pits were from a single occupation episode. Artifacts in the pits appeared to corroborate this, as many similar-style spear points and ceramic vessels were contained within. Based on a number

of lines of evidence, the pits were interpreted to have functioned originally as storage pits, and then they were filled in with refuse from the occupations. Kathryn Puseman of PaleoResearch Laboratories found that among the charred botanical specimens in the refuse were oak and hickory, indicating the type of forest that was nearby. Geochemical studies by project geoarchaeologist Joe Schuldenrein supported the notion that a forest was present, but the studies also suggested that there were some open habitats in the immediate site vicinity, such as cleared areas and paths. Plant seeds, acorn, and hickory nuts in the pit refuse indicated that these foodstuffs were likely components of the prehistoric diet. In addition to plant foods, Noreen Tuross of the Smithsonian Institution's Conservation Analytical Laboratory, confirmed that blood was present on the edges of stone tools, and in several cases, deer blood was positively identified, further showing that the diet consisted of terrestrial game species. Much of the evidence showed that these peoples were mobile, and analyses of the stone tools further confirmed that this was the case. Philip LaPorta, project geologist, examined the jasper artifacts, and found that many were originally derived from quarries 8 kilometers to the north. Some examples, however, were derived from sources up to 150 kilometers distant. In other cases, Native Americans procured materials from local streams, as shown by reassembled examples of cobbles and pebbles that were split by the inhabitants to obtain flakes with sharp edges.

Most recently, major excavations were performed at the Hickory Bluff site, located on the east bank of the St. Jones River, in the capital city of Dover. John Rutherford, Field Supervisor, excavated at the 5-acre site for 10 months, placing 850 excavation units and recovering 100,000 artifacts and 300 hearths, pits, and possible residential structures. Radiocarbon dates and diagnostic styles of artifacts indicated that Native Americans were consistently returning to the site for 6,000 years. While we are fortunate to have such a lengthy record of habitation at Hickory Bluff, the site is not deeply buried, and all artifacts occur in a layer which measures no more than 2 feet in thickness. While this can present a "problem" if our goal is to study snapshots or episodes of the past, as at Pompeii, we consider the long term picture to be an opportunity for our research. That is, every undergraduate and graduate student learns that a major benefit of the archaeological record is that it preserves long-term processes that scientists can not observe in a single lifetime. Thus, a goal of the Hickory Bluff excavations is to examine how people repeatedly use material remains and space through time. Our initial impressions suggest that Native Americans were economizing on everything. During excavation we immediately noticed that old hearths were being re-used again, and fire-cracked rocks from earlier hearths were being scavenged to construct new fires. Recycling was extremely important, and we see stone tools being re-used in later periods, spearheads and arrowheads gradually being whittled down to smaller projectiles after secondary use. We have also noticed that the temper in ceramic vessels was made from earlier pots, and in one cache, we found hammerstones and broken pots together, suggesting the potsherds were going to be crushed down for use in a new pot at a later time. Thus, the archaeology of Hickory Bluff promises to provide us with an important lesson concerning how people recycle material, how they re-use space, and more importantly, why do people repeatedly occupy the same place over and over again.

While we are currently learning a lot about the prehistory of Delaware, we are also aware that we need to disseminate our information to a broad audience. To further promote Delaware's archaeology, we are in the process of developing a web site for the public and professionals. The "Archaeology of Delaware" web site pulls together 20 years of research information. General underpinnings concerning Delaware's prehistory and history will be provided, professional reports and publications will be listed, and lesson plans and materials for teachers and students will be displayed. In addition, as part of our outreach efforts, we are developing internet reports. The internet reports strive to be "living documents", no longer simply shelved in some archive and available to only a few researchers. For instance, we plan to make available the Hickory Bluff artifact catalogue and site grid to any on-line computer user. These users can analyze the Hickory Bluff data sets, displaying graphs, tables, and maps, and conducting research, comparing our artifact catalog to other site assemblages.

Through the department of transportation's efforts, we are trying to fill in gaps about the record of occupation of Delaware. We are also attempting to enrich our views of past behavior by bringing the latest scientific techniques to bear on the sites. We wish to elucidate information on detailed aspects of human activity and larger issues having to do with questions about human adaptations through time. Our goal is to not only provide high quality information to archaeologists, but we also want all members of society to learn about the past by directly participating in archaeology. For further information or literature on Delaware archaeology, or to find out about excavations in progress, contact Kevin Cunningham (302) 760-2125, [KCunningham@mail.dot.state.de.us](mailto:KCunningham@mail.dot.state.de.us) or Michael Petraglia (703) 218-1084, [Mike\\_Petraglia@parsons.com](mailto:Mike_Petraglia@parsons.com).