

*Thunderbird Research Corporation and the
Middle Atlantic Archaeological Conference present*

A Symposium to Honor the Work of William M. Gardner

LOVE IS FLEETING



STONE TOOLS ARE FOREVER



*September 26-28, 2008
National Conservation Training Center
Shepherdstown, West Virginia*

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NOTES

Sponsors:

The Thunderbird Research Corporation
The Middle Atlantic Archaeological Conference

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Anthropology Department, Catholic University

**William Milton Gardner
1935-2002**

Dr. William M. Gardner, Professor Emeritus at The Catholic University of America in Washington D.C., died at his home in Hedgesville, West Virginia on December 20, 2002.

Dr. Gardner came to Catholic University in 1967, fresh out of the doctoral program at the University of Illinois at Urbana (he had carried out fieldwork along the Upper Kaskaskia River in Illinois, and earlier in Florida at Waddells Mill Pond). As the first archeologist in a well-established and highly regarded Anthropology Department, Gardner instituted archeological studies at both the graduate and undergraduate levels at Catholic, and later served as department Chair for a number of terms.

Early on, using National Science Foundation support, Gardner joined with Robert L. Humphrey (George Washington University) and Charles W. McNett, Jr. (American University) to form a consortium for the investigation of the Potomac Valley's archeological resources (a program now known as the Potomac River Archeological Survey under the direction of Dr. Joe Dent at American University). The consortium resulted in a number of joint studies of prehistoric sites in the Washington, D.C. area, such as the Rowe site (*Maryland Archeology* 6[1]), Loyola Retreat, and the Ruppert Island site.

In the early 1970s, as an outgrowth of the Potomac Valley research, Gardner began his investigation of a site on the Thunderbird Ranch in Virginia's Shenandoah Valley. Later known as the Flint Run Paleoindian Complex—with the Thunderbird site at its core—this archeological manifestation was the focus of Gardner's research for more than a decade. Summer-long field schools were carried out for years, and served as the training ground for many of Gardner's students and the basis for numerous dissertations and theses. Meticulously excavated, this complex of sites revealed the 12,000-year-old remains of intact chipping clusters, living floors, and a Paleoindian house pattern. Using a multidisciplinary approach then new to archeology (including such varied tactics as studies of soils and geology, environmental reconstruction, piece plotting of artifacts, and core reconstruction), Gardner attempted to recreate the physical and cultural landscapes present at Flint Run during Paleoindian times. The site complex also revealed settlement and subsistence patterns that Gardner successfully interpolated to the larger Middle Atlantic region as a whole.

In the mid-1970s, Gardner began to enter the nascent cultural resources management (CRM) world, the world of archeology-for-pay. Unlike others, perhaps, Gardner saw two other aspects of CRM often overlooked: a source of training for students, and a rich archeological research lode waiting to be mined. Regardless of how seemingly insignificant a site appeared, or how meager the results of a survey proved to be, Gardner had the knack of retrospectively analyzing the findings from multiple projects and repackaging the results as broad sweeping models applicable to large areas of the Middle Atlantic region. Typically, these syntheses of Gardner's thoughts and experiences would result in a pivotal paper presented at the annual Middle Atlantic Archeological Conference (MAAC), of which Gardner was a founder. MAAC always seemed to epitomize Gardner's approach to archeology—everyone had a right to their opinion (he fought long and hard in the early days of MAAC, demanding that *students* be allowed to participate) and, once presented, that opinion deserved scrutiny by all. Only in that way could theory be proved or disproved, and only in that way could archeology advance. In 1999, the Middle Atlantic Archeological Conference presented Gardner with its first Lifetime Achievement Award in recognition of his many contributions to Middle Atlantic archeology.

In 2001, Gardner retired from Catholic's Anthropology Department after teaching there for 35 years. He continued his CRM pursuits through his company, Thunderbird Archeological Associates. Most recently he focused on finding deeply buried Early Woodland components in Middle Potomac floodplains. He also "rediscovered" historical archeology. In the early 1970s Gardner had undertaken several historic-period projects (Matildaville, Virginia and Harpers Ferry, West Virginia) for the National Park Service. Thirty years later, he began specializing in the archeology of African American slave sites and French-and-Indian War forts

Bill Gardner leaves a legacy of fine archeological scholarship, and dozens of students to carry on that legacy. He will be sorely missed.

Dennis Curry, Maryland Historical Trust

**Select Bibliography of Published Works on Middle Atlantic Region
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 1992 Some Aspects of Lithic Analysis. In *Upland Archaeology in the East: Symposium IV*, edited by M.B. Barber et al, pp.234-242. USDA Forest Service, Southern Region, Cultural Resource Management Report No.92-1. Atlanta.
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 1969 A Report of Excavations at the Stout Site (Fairfax County, VA). *Quarterly Bulletin of the Archaeological Society of Virginia* 24 (2):133-143.
- Gardner, William M. and Charles W. McNett
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PROGRAM SCHEDULE

All presentations will take place in the Auditorium. Exhibits can be viewed in the Roosevelt Room, on the lower level of the Dining Hall.

Meals are in the NCTC Dining Hall or on your own. If you are not staying overnight at NCTC, meal tickets for Friday and Saturday may be purchased on Friday at the Registration Table, 9:30-10:00, or in the Gift Shop, 11:00-4:00. Guests may also purchase food items *a la carte*. No meal tickets will be sold on Saturday, but guests may purchase food items *a la carte*.

FRIDAY MORNING

Working the System: CRM, Historic Preservation, and Substantive Contributions to Research

9:00-3:00	Registration Table open.
9:30-10:30	Coffee and break treats available outside of the Auditorium.
9:55-10:00	Welcoming Remarks.
10:00-10:20	<i>Working the Cultural Resource Management System From Academia, Or, Panama City Boy Makes Good.</i> Mark Barnes.
10:25-10:45	<i>Turning Dross into Gold: Learning about the Colonial Past from a Career in CRM.</i> John Bedell.
10:50-11:10	<i>Space, Time, and the Settlement System Concept.</i> Philip Perazio.
11:15-11:35	<i>Using Gardner's Predictive Models in Cultural Resource Management: An Analysis of Archeological Sites in Northern Virginia.</i> John Mullen.

LUNCH Make sure to have your registration tag with you if you leave the NCTC campus – you will need it to get back into the facility.

FRIDAY AFTERNOON

1:00-1:20	<i>Small Upland Sites in the Dowdy Creek Watershed, New River Gorge National River, Fayette County, West Virginia.</i> Lyle Torp.
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1:25-1:45 *African American Field Slave Site Predictive Model: Ten Years of Refining William Gardner's Theory. Where and How We have Looked, and What We have Found.* Tammy Bryant.

1:50-2:10 *How You Gonna Keep 'Em Digging Shovel Tests After They've Heard a White's MXT?: One Man's Journey Into Military Archaeology, Or, I'm in the Camp But I Can't Find the #%@!! Minie Balls.* Joseph Balicki.

2:15-2:35 *Gizzard Stones or Game Pieces?* Charles Goode

BREAK

3:05-3:25 *Searching For Small Sites in the Regulatory Realm.* John Martin.

3:30-3:50 *All Data Are Not Created Equal: Reconciling Archaeological Scale with Human Behavior.* Jonathan Burns.

3:55-4:15 *The Iraq Mass Graves Investigation Team: Application of Anthropological Forensic Sciences In Finding Justice for Crimes Against Humanity.* Paul Rubenstein.

4:20-4:40 *Ossuary Burial in the Middle Atlantic: An Overview.* Dennis Curry.

4:45-5:05 *Gone But Not Forgotten: New Perspectives Resulting from Re-analysis and Synthesis of Existing Delaware NAGPRA Collections.* Dustin Cushman

5:10-5:30 *An Archaeological Perspective on Native American and European Contact.* Michael Stewart.

DINNER

Make sure to have your registration tag with you if you leave the NCTC campus – you will need it to get back into the facility.

FRIDAY EVENING

Bringing It Back: Education and the Public in Archaeology and Historic Preservation

7:00-7:20 *Giving It Back: The Thunderbird Public Education Legacy.* Joan Walker

7:25-7:45 *Dr. Gardner's Famous Elixir: Public or Perish.* Kevin Cunningham.

7:50-8:10 *Giving It Back II: Obligations to the Public Go Beyond Education.* Laura Dean.

- 8:15-8:35 *Public Archaeology: Alive and Well in Loudoun County, Virginia.* David Clark
- 8:40-9:00 *Building Partnerships, Relinquishing Control Working with American Indians in Delaware and New Jersey.* Cara Blume.
- 9:05-9:20 *Public Archaeology in the War Zone.* Sandra Scham.

SATURDAY MORNING

All presentations will take place in the Auditorium. Exhibits can be viewed in the Roosevelt Room, on the lower level of the Dining Hall.

The Inescapable Significance of Cultural Ecology and Environmental Sciences in Archaeology

- 7:30-11:30 Registration Table open.
- 7:45-8:05 *Cultural Ecology on a Need-To-Know Basis.* Roger Moeller.
- 8:10-8:30 *Location, Location, Location: The Archaeology of Prime Fishing Site Selection.* Bill Schindler.
- 8:35-8:45 *Hunter-Gatherers, Resilience Theory, and the American Chestnut Forest: Persistence and Change in the Middle Atlantic Uplands.* Carole Nash.
- 8:50-9:10 *Modeling an Archaic Population History.* Heather Wholey.
- 9:15-9:35 *Climatic Change and Landscape Evolution Associated with Population Evolution in the Last 12, 000 Years.* Anthony Segovia.

BREAK

- 10:05-10:25 *Homelands, Histories, and Landscape Ecologies: Towards an Archaeology of Mashantucket Pequot Gardens.* Russ Handsman.
- 10:30-10:50 *"Dirt" to Soil: Advances in the Application of Soil Science to Archaeological Studies.* John Foss
- 10:55-11:15 *A Petrographic Reappraisal of Pottery Aplastics: Some Theoretical and Methodological Implications for Analysis and Interpretation.* George Pevarnik.
- 11:20-11:40 *Formation of Hearth Basin Features: Implications for the Interpretation of Prehistoric Archaeological Sites in the Middle Atlantic Region.* Michael Stewart.

LUNCH

Make sure to have your registration tag with you if you leave the NCTC campus – you will need it to get back into the facility.

SATURDAY AFTERNOON

Paleoindian Studies

- 1:00-1:20 *Pre-Clovis and Bigfoot: The Searches Continue.* Stuart Fiedel
- 1:25-1:45 *Was There a Nearly Invisible Earliest Phase in the First Peopling of the Americas? Or: Was Someone Butchering Mammoths in North America 20,000 Years Ago?* Gary Haynes.
- 1:50-2:10 *The Gardner Approach Revisited: "Finding Old Dirt" in the Nottoway River Valley of Southeastern Virginia.* Michael Johnson.
- 2:15-2:35 *Lockhart: A Quarry Related Site in the Flint Run Paleoindian Complex.* Robert Wall

BREAK

- 3:10-3:30 *Interdisciplinary Archaeology in the Compliance Environment.* Eric Voigt.
- 3:35-3:55 *A New Perspective on Shawnee Minisink Re-Occupation and Landscape Use During the Late Pleistocene.* Joseph Gingerich.
- 4:00-4:20 *Soil and Landscape Modifications During the Younger Dryas Chronozone and the Demise of Clovis: Evidence from Cactus Hill, the Delmarva Peninsula, and Shawnee Minisink.* Dan Wagner, Darrin Lowery, Joseph Gingerich, and John Wah.
- 4:25-4:55 *The Barton Site: Paleoindian and Early Archaic Occupation in the Upper Potomac Valley.* Robert Wall .
- 5:00-5:25 *Paleoindian/Early Archaic Cultural Continuity in the Northeast: An Examination of Gardner's Criteria in the Middle Atlantic Region, New England and the Great Lakes.* Kurt Carr.

DINNER

Make sure to have your registration tag with you if you leave the NCTC campus – you will need it to get back into the facility.

SATURDAY EVENING

5:30-6:30 Reception, Roosevelt Room (a keg will be tapped)
6:30-9:00 Dinner and *Reminiscences on a Career* in the Dining Hall.
9:00-11:00 Farewell gathering, Roosevelt Room/Bar.

ABSTRACTS

How You Gonna Keep 'Em Digging Shovel Tests After They've Heard a White's MXT?

One Man's Journey Into Military Archaeology, Or, I'm in the Camp But I Can't Find the #%@!! Minie Balls.

Joseph F. Balicki

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The American Civil War resulted in the creation of a countless number of campsites which range from large cantonments adjacent to permanent fortifications to short term field camps. These sites contain a wealth of information on adherence to military doctrine, tactical positioning, group identity, ethnicity, foodways, vernacular architecture, settlement pattern, and mid-nineteenth-century material culture. Since the 1960s, relic hunters have successfully searched thousands of these sites. However, during the same period, professional archeologists, using standard archeological field methods have often overlooked or inadequately investigated Civil War camps. As a result, camps are under-represented and their research potential continues to be under-appreciated. This paper discusses the history of Military Archeology in the Middle Atlantic with an emphasis on metal detector methodologies that are useful in investigating camps.

Working the Cultural Resource Management System From Academia, Or, Panama City Boy Makes Good

Mark Barnes

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The information presented in this paper cover conversations, recollections, and shared experiences with Dr. William Gardner during the period 1977-1983 when the presenter was working on his doctorate at Catholic University of America, in the District of Columbia. This period in

American Archaeological History is currently emerging as a critical juncture in the development of the discipline, as new Federal Government legislation covering the protection of the environment meant increasing monetary support for archaeology. Archaeologists soon realized that such support required a "trade off" as researchers in academia reorganized their courses and programs to match government rules seemingly alien to everything they had been taught regarding the conduct of archaeological research. Gardner appears to have chosen to develop a program at Catholic University, which would benefit his students and support his own research interests by selectively taking advantage of what he referred to as the "Brave New World" of archaeology.

Turning Dross into Gold: Learning about the Colonial Past from a Career in CRM

John Bedell

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During a now 16-year career as a CRM archaeologist in the Mid Atlantic, I have worked on every sort of misguided, under-funded, mismanaged, and misplaced project. However, I have found that it is possible to learn about the past from almost every project. The key, I believe, is to keep up on important research questions in the field and to keep those questions in mind as we work. That way, when a chance comes up to explore an important site or documentary data set, we are ready to seize it. A knowledge of the field and active research questions is supposed to be an important part of CRM. After all, the significance of sites should be interpreted in the context of what is known and not known about the periods they represent. However, the archeology, history, material culture, and other relevant fields that we may intersect are broad and it is hard for anyone to keep up, especially across a wide geographic area. Therefore we also need both our own research foci, and the acquaintance of others who can help us in the areas we do not know as well. I have long pursued an interest in the related questions of what was like on the frontiers of colonial settlement in the region and what kinds of questions can be answered in the course of CRM research. Because of my interest in these topics I have been able to refine the research questions that might be answered in the course of Phase I, II, and III investigations, to understand the significance of sites that have been dismissed under a checklist approach to evaluation, and to seize opportunities for research that have come out of unlikely projects.

***Building Partnerships, Relinquishing Control
Working with American Indians in Delaware and New Jersey***

Cara Lee Blume

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For most of my 40 year career in archaeology, I have practiced what is generally known as “public archaeology”—working in the public sector, interpreting archaeological research to the general public through talks and exhibits, including members of the public in excavations, and so forth. Until relatively recently, however, I rarely explicitly sought to work with the descendants of the people who produced the material remains I excavated. This changed a decade ago, when the controversy over the report on the Bloomsbury site taught me that archaeology and the bureaucracy that surrounds it have the power to affect real people alive today in ways that I had not previously considered. Since then, I have worked at building partnerships with American Indian tribal communities in Delaware and New Jersey that are collaborative in nature, so that both parties have something to gain from the relationship. In this paper, I review my experiences and suggest guidelines for developing effective relationships with other American Indian communities.

African American Field Slave Site Predictive Model: Ten Years of Refining William Gardner’s Theory. Where and How We have Looked, and What We have Found

Tammy Bryant

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The elusive African American field slave sites with their pattern and signature on the landscape began to strike an interest with William Gardner in 1997 and 1999 after a CRM project discovered two distinct clusters of field slave sites in Fairfax and Loudoun Counties. An analysis of the material culture as well as the environmental variables and topographic setting was undertaken in order to develop a predictive model for these sites. Criteria for this predictive model includes, distance from the manor house, proximity to a constant water source, elevation, and location on the landform in relation to prime agricultural land. The goal was to develop a two-fold predictive model based on environmental setting and material culture there by creating a "blueprint" for field slave sites in the Northern Virginia Piedmont. One of William Gardner's many gifts to the discipline of Archeology was his ability to read the landscape. This ability is reflected not only in his prehistoric models but crossed into his historic

site prediction models as well. Thunderbird Archeology has been using and refining this field slave site model over the last 10 years.

This paper will present the model, define the fieldwork approach, and highlight the sites that have been located using the model. This model has become increasingly important in the CRM world because of rapidly encroaching development on the rural areas of the countryside.

***All Data Are Not Created Equal:
Reconciling Archaeological Scale with Human Behavior***

Jonathan A. Burns

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Because archaeological site structure is inextricably linked to the size of our analytic units, Middle Atlantic archaeologists are in need of more appropriate scales of data collection and spatial analysis to further our understanding of prehistoric human behavior at short-term campsites. Although researchers encounter similar distributional phenomena in the archaeological record, they rarely produce data sets that lend themselves to comparative analyses. This study calls for a shift to human-scale analytic units based on anthropometric data and ethnoarchaeological insights of hunter-gatherer behavior. Demonstrating the specific benefits of excavating short-duration campsites using smaller collection units than the ones commonly employed in the Middle Atlantic region, this research asserts that archaeologists are missing valuable behavioral data. Additionally, small artifacts are the most important class of evidence for identifying the locations of past activities, but are systematically overlooked during excavation and analyses. Data from two Pennsylvania rockshelters are used to demonstrate that there is behaviorally meaningful data encoded within their arcing distributions of tools, debitage, animal bone, pottery, and charcoal; but that our scales of resolution need to be adjusted to capture and compare this information and to make investigations relevant to ethnographic insights.

Paleoindian/Early Archaic Cultural Continuity in the Northeast: An Examination of Gardner's Criteria in the Middle Atlantic Region, New England and the Great Lakes.

Kurt W. Carr
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Bill Gardner was one of the first to argue for cultural continuity between the Paleoindian and Early Archaic Periods in the Middle Atlantic region. Taking a cultural ecological approach and ignoring projectile point types, he used specific cultural traits to demonstrate strong similarities between these two archaeological units and especially differences with the Middle Archaic bifurcate phase. Broadly following Julian Steward, Bill identified the *culture core* or the essentials of the adaptive strategy for the Paleoindian/Early Archaic period. The "litho-centric" aspects of this model have been widely criticized. However, Gardner's explicit cultural ecological approach has had a lasting impact on the archaeology of the Middle Atlantic. This presentation will examine the applicability of his proposal after 30 years of additional work in the Northeast.

Public Archaeology: Alive and Well in Loudoun County, Virginia

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As the fastest developing county in the USA for 6 of the last 10 years, Loudoun County Virginia has experienced a serious, negative impact on its archaeological resources. County government is unable to keep pace as it faces serious, yearly, budget constraints and most of the local community is unaware of the crisis. This presentation documents recent efforts to counter this trend countywide, using "whole community", grassroots, archaeological public awareness programs and by creation of the Loudoun Archaeological Foundation (2007), a professional archaeological research/educational organization developed to promote/support the design/operation of public archaeological programs countywide.

Dr. Gardner's Famous Elixir: Public or Perish

Kevin Cunningham
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Buried deep in the good doctor's medicine bag was an oddly-shaped glass bottle with the words "Public or Perish" scrawled on the label. And once you dared to open the bottle and inhale the pungent smelling contents, you were on a course that many archeologists ignored in the past - that of public involvement. Gardner's dedication to public outreach and involvement spanned his entire career and influenced countless future archeologists. As you know, I not only inhaled the contents of that bottle but I may have drunk the whole thing. Over the past several decades at DelDOT, I have tormented co-workers, transportation engineers, consultants, and SHPO staff with the madness that Dr. Gardner instilled in me - which is to take archeology out of the laboratories, the conference rooms, the curation facilities, and hand deliver it to the affected populations and descendant communities. And to use as many creative and innovative ways as possible, to elicit their responses, incorporate them, involve them and ultimately make the research stronger. And now, since 2003, I've been given the opportunity to take the show to India, with Gardner's medicine bottle ever at hand, in order to bring archeology to life for the local populations in the Kurnool District of Andhra Pradesh. In this presentation, I would like to describe some of the methods my Indian, European, and Australian colleagues and I developed to introduce the rural farming, herding, and mining villages to the ongoing archeology in their area.

Ossuary Burial in the Middle Atlantic: An Overview

Dennis C. Curry
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In an attempt to emulate Bill Gardner's famous, sweeping syntheses, an overview of ossuaries found in the Middle Atlantic—from Cape Henlopen, Delaware to Cape Fear, North Carolina—is presented. Historical accounts of Native American burial practices from the Middle Atlantic region and elsewhere are reviewed, and the ossuary burial process itself is explored. Finally, the structure of ossuary features is contemplated—their place and role in the landscape of aboriginal communities are considered, their individual internal composition and patterning are investigated, and associated artifacts are examined to assess the social status of the persons represented in these unique features.

Gone But Not Forgotten: New Perspectives Resulting from Re-analysis and Synthesis of Existing Delaware NAGPRA Collections

Dustin Cushman
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Over 100 years of work in the Delaware Valley has resulted in a large collection of mortuary remains and related data. While these works have been referenced by other scholars and researchers over the years, they have never been completely re-analyzed or the subject of a valley-wide cross-site comparison in order to uncover patterns relating to the mortuary rituals. Undertaking such tasks has resulted in new information on aspects of Delaware culture such as gender, status, belief systems, land use, territoriality and relations with colonists. All of these aspects have, in turn, led to a better understanding of the social organization of the Delaware. While the Delaware are believed to have lived for the most part in small autonomous bands made up of extended families, the findings in this study indicate that the mortuary rituals were probably set at the clan or tribal level. This appears to be indicated by shared aspects of burial practice in historically known tribal regions. Additional evidence suggests some of these cemeteries or burial areas may have been shared among these bands. If such is the case, funerals may have been activities where neighboring bands were brought together.

Giving It Back II: Obligations to the Public Go Beyond Education

Laura Dean
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Back in the dark ages, the public consisted of those folks who happened to wander by and stopped to ask what you were doing in the dirt—were you finding any arrowheads?. For those of us doing urban archaeology many of these folks were surprisingly knowledgeable about their local history and offered important observations. These days, though, because of the National Historic Preservation Act (NHPA) the public should be more actively involved in all aspects of federal archaeology conducted under Section 106. But why? Because the NHPA makes it clear that historical values are public values. And because these public values change over time, public input, is essential to federal agencies in making informed decisions about where these values lie today. Consideration of public values and interests is essential to federal management decisions about the fate of significant archaeological resources. Unfortunately, a misunderstanding of the role that “public interest” plays in Section 106

archeology decision making sometimes inhibits resolution that benefits the public.

Pre-Clovis and Bigfoot: The Searches Continue

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Bill Gardner was, in my opinion, rightly skeptical about pre-Clovis claims. Recently, the quest for hard evidence of cryptic early *Homo* in the Americas—Pre-Clovis humans—has begun to resemble the long, fruitless and often comical search for that other cryptic hominid, Bigfoot. We can now add to the supposed footprint from Monte Verde the claim of 40,000-year-old prints at Valsequillo. And if that’s not enough, there’s 14,300-year-old human scat from Paisley Cave. Unmistakable stone tools in a secure stratified context would be nice, of course, but the true believer will grasp at anything. Surprisingly, some of the best ostensible evidence for pre-Clovis occupation has come from sites in the mid-Atlantic region—Meadowcroft, Cactus Hill, Miles Point. However, do these sites support a consistent and compelling narrative of pre-13,000 cal BP occupation? Are such “new” ideas as a trans-Atlantic Solutrean migration tenable in view of the current knowledge of paleoclimate, chronology, and molecular genetic evidence?

“Dirt” to Soil: Advances in the Application of Soil Science to Archaeological Studies

J.E. Foss
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The transition from considering soil as plain “dirt” and mainly the stuff that must be excavated to unearth artifacts has been taking place the past four decades. Today we realize that soil profiles can be considered an excellent “history book” that can reveal landscape formation and environmental factors influencing the present soil-landscape. This information can be vital in evaluating the environmental factors at archaeological sites. Dr. W. Gardner, decades ago, realized the importance of soils and geologic information to fully evaluate the environmental history of sites. Landscape models, such as the initial one at the Thunderbird site in Virginia, have been especially useful in placing the archaeological finds in context with sedimentary sequences, soils, and age-related strata. Although many studies have stressed the morphological characteristics of soils, laboratory characterization of the physical, chemical, and

mineralogical aspects of soils has also aided in expanding the interpretation of soils at archaeological sites. This presentation will focus on the application of soil science to archaeological sites in very contrasting environments and ages.

***A New Perspective on Shawnee Minisink
Re-Occupation and Landscape Use During the Late Pleistocene***

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This paper provides an overview of the new investigations at the Shawnee-Minisink site in northeastern Pennsylvania. New excavations of the Paleoindian level offer an opportunity to re-evaluate the Clovis-age occupation and compare it to other early Paleoindian sites in the region. Like other known large Paleoindian sites in eastern North America, Shawnee-Minisink is located near a cryptocrystalline quarry and appears to have been reoccupied. Although the setting of Shawnee-Minisink is similar to other quarry-related Paleoindian sites, the specific site function is unclear. Here, I will discuss the evidence for reoccupation, variation in lithic use, and the hypothesized function of the Shawnee-Minisink site.

Gizzard Stones or Game Pieces?

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During excavations at Site 44LD538 and 44LD539, two sites located in Loudoun County, Virginia occupied by African-American Field Slaves during the late eighteenth and early nineteenth century, many small smoothly worn ceramic, stone, and glass items were recovered from various contexts. Similar items have also been recovered from a number of sites throughout the Southeast, Midwest, and Middle Atlantic States. At the majority of these sites, these items are interpreted as gaming pieces used by African Americans in playing a form of board game that is typically referred to as Mankala. Other researchers who have recovered these items at sites in Tennessee and Louisiana believe that they are likely gizzard stones that were worn smooth by grinding actions in the gizzards of chickens, turkeys, and other birds. This paper will investigate the various contexts in which these items were recovered at the sites where they have been reported and will discuss why the gizzard stone interpretation is the more likely and how this does not detract from the information they provide about African-

American culture and traditions, but instead enriches our understanding of African-American foodways, as well as late-eighteenth and early-nineteenth-century foodways in general.

***Homelands, Histories, and Landscape Ecologies:
Towards an Archaeology of Mashantucket Pequot Gardens***

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“Are cultural adaptations a reflection of the lived realities of peoples’ lives, or are they only models built up from our flawed perceptions of those lives?” Bill Gardner and I long argued this question over many crab-and-beer lunches at Robertson’s in Pope’s Creek, Maryland more than 35 years ago, before the rise of post-processual archaeology. We never reached a consensus – yet we did agree the question was fundamental to being an archaeologist and doing any archaeology.

Here I return to this question and Bill’s assertion that archaeologists are always “time travelers” [see the Introduction in *A Small History of the Forgotten and Never Known* (Gardner and Walker 1990)], by using landscape ecology as a key for unlocking the hidden and unknown histories of Pequot gardening and gathering at Mashantucket. Arguably, fine-grained studies of ecological diversity and historic archaeological sites will help illuminate the human (and cultural) processes of landscape change, leading to new understandings of Native lives in the reservation period. In this journey, constantly moving between present and past, archaeological practices become “scene shifters,” ways of seeing (and not seeing) that always define the next piece of research, the sort of real science that is Bill Gardner’s lasting legacy.

Was There a Nearly Invisible Earliest Phase in the First Peopling of the Americas? Or: Was Someone Butchering Mammoths in North America 20,000 Years Ago?

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Part of the argument that a pre-Clovis population existed in North America arose from the discovery of cut-marked and fractured mammoth bones that date earlier than the Late Glacial. Some localities contain specimens dated 15-21,000 cal BP, and some are even much older, such as

those from Old Crow in the Yukon. Bill Gardner may have considered this sort of material very poor evidence, but other archeologists now seem willing to accept it. Experimental work to demonstrate that humans could have marked and broken the mammoth bones has been very limited, as is also the case with actualistic research to demonstrate that non-cultural processes could not have modified the bones. New experiments in bone-breaking are briefly described in this paper.

The Gardner Approach Revisited: "Finding Old Dirt" in the Nottoway River Valley of Southeastern Virginia

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In the 1990s, stratified Early Archaic, Clovis and hypothesized "Pre-Clovis" lithic assemblages were discovered at Cactus Hill (44SX202). These data were found the normal way: collector report followed by emergency salvage excavation. In the first attempt to replicate the Cactus Hill model simple surface landform was used to target the Barr site (44SX319), located about 10 miles further down the Nottoway River. Testing at Barr produced stratified material dating from Early Archaic Palmer up through Middle Woodland. Based on analysis of data from Barr and Area D at Cactus Hill, where similar soil/sediment and cultural associations were discovered, a soil/sediment model was used to test the Blueberry Hill site (44SX327), located 1,000 feet downstream from Cactus Hill. With almost no surface or plowzone expression of a site, rough soil and archeological testing produced a hypothesized Paleo horizon at 2.5 feet below the surface. Using the data from these three sites and previous Paleo research by Joseph M. McAvoy (1992), the entire Sussex County soil survey was examined in detail and another candidate for buried Paleo occupations was identified further downstream. It was at his point that the author was gently reminded by John Foss (after Bill Gardner's memorial service) that archeologists have a tendency to do this kind of research backwards. They find the site and then do the geology to make sense of what they found. As a result, the method used to discover a fluted point level 35 inches deep at the Rubis-Pearsall site (44SX360) was modeled after discovery of the buried Paleo component at Thunderbird more than 35 years earlier. The Rubis-Pearsall discovery will be the focus of this presentation.

Searching For Small Sites in the Regulatory Realm

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Archaeological survey via the typically mandated 50-foot interval shovel test pits in some situations often yields little in the way of artifact recovery, even when high probability areas or other locations of suspected habitation are the targets of investigation. In some cases linear Areas of Potential Effects (e.g., roadway, pipeline) restrict prime areas near drainages or across other attractive landforms. However, they cannot bear total blame for the often disappointing results. The development of testing guidelines attempts to balance the regulatory requirements for resource protection and resistance to strict regulations with limited success. Standardized testing intervals provide consistent coverage and comparable data, but may not be adequate for identification of sites in all locales. Area specific testing or sampling is urged to ensure adequate identification, especially in expected locations of small, low-density sites. However, without strong requirements and monitoring, the business of CRM is likely to win out over archaeological research and protection.

Cultural Ecology on a Need-To-Know Basis

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The essence of cultural ecology is to understand the interaction of humans within their environment. Through time cultural adaptation has enabled humans to become less dependent on the vagaries of temperature fluctuations, precipitation, and resource availability. As anthropologists we have studied the theories and debated the philosophies of Leslie White, Robert Carneiro, V. Gordon Childe, Julian Steward, Thomas Malthus, and Charles Darwin as they have applied to living cultures, but Bill Gardner blended all of this into a cultural ecology of prehistoric societies. Although we give lip service to this concept, are we really utilizing these concepts to the maximum extent possible?

Using Gardner's Predictive Models in Cultural Resource Management: An Analysis of Archeological Sites in Northern Virginia

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William Gardner developed a site prediction model for locating prehistoric sites in the Middle Atlantic region that has been widely used by regional archaeologists. With little adjustment, the model has been used to predict the location of nearly all site types. The CRM firm that Gardner established has been using and refining this model for over 25 years and has recorded hundreds of sites in the Northern Virginia region. Using GIS to analyze the extensive data set gathered under the auspices of CRM, this paper looks at the usefulness and utilization of this site prediction model today.

Hunter-Gatherers, Resilience Theory, and the American Chestnut Forest: Persistence and Change in the Middle Atlantic Uplands

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A great challenge of hunter-gatherer archaeology, and one well-understood by William Gardner, is the explanation of cultural change in small-scale societies. With strong ties to traditional environmental anthropology and culture history studies, the multi-disciplinary research tradition developed by Gardner often approached cultural change as an adaptive response to factors external to the group in question. While powerful for the creation of a regional research framework, such an approach is limited in its ability to recognize adaptation as a complex process occurring at multiple temporal and spatial scales. Using the lens of Resilience Theory, this presentation offers a case study from the Late Archaic Virginia Blue Ridge to demonstrate that the veneer of long-term, persistent mountain lifeways masked transformative changes in upland sociality that were directly tied to similar changes in lowland settings. It is argued that culturally maintained stands of American Chestnut (*Castanea dentata*), rather than acting as a commons, were resource territories with carefully controlled access, and their maintenance required similar social reorganization as that necessary for plant-based horticulture. The uplands were part of a broader pattern of Late Archaic social negotiation in which seasonal mobility was not a system-preserving strategy as is often supposed,

but a system-transforming strategy tied to the emergence of social complexity.

Space, Time, and the Settlement System Concept

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The development of the settlement system concept in archaeology has led to ever more detailed understandings of the complex sets of factors that influenced people's decision making process in designing and carrying out hunter-gatherer adaptive strategies. Drawing on examples from the work of Bill Gardner and others, settlement-subsistence systems are seen as the more or less viable solutions to contradictions created by the uneven spatial and temporal distributions of both people and the resources they chose to exploit.

A Petrographic Reappraisal of Pottery Aplastics: Some Theoretical and Methodological Implications for Analysis and Interpretation

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Multiple petrographic analyses of Native American pottery from the Delaware Valley have clearly demonstrated that macroscopic methods commonly used to identify mineral inclusion are inadequate. Subsequent interpretations based on such flawed identifications are questionable at best. In regard to mobile pottery producers, it is suggested that the theoretical framework used to construct types/typologies is inadequate because it does not account for compositional variability (i.e., clays and temper/aplastic) that is the product of differential resource availability related to production location. Examples are presented that support these assertions. Metamorphic rock fragments are often misidentified as quartz which impacts considerations of where the temper originated or was procured, and thus how these data are used in typological assessments and settlement pattern analysis. Further, without an intimate knowledge of the nature of local clay resources, it is inappropriate to uncritically describe mineralogical applastics in pottery as temper. The theoretical and interpretive potential of future pottery analyses are discussed and used to demonstrate how these methods may serve as an indicator of varied social processes that are not tangible using traditional approaches.

The Iraq Mass Graves Investigation Team: Application of Anthropological Forensic Sciences In Finding Justice for Crimes Against Humanity

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The U.S. Army Corps of Engineers is collaborating with the U.S. Department of Justice's Regime Crimes Liaison Office, in the U.S. Mission (Embassy), Baghdad, to perform investigations, studies, evidence collection and recovery of human remains, cultural items and documents from mass graves in Iraq. The purpose of this mission is to provide evidentiary information for the prosecution of high-ranking officials of the former Iraqi Regime by the Iraq Special Tribunal. The Corps of Engineers led Iraq Mass Graves Investigation Team completed multiple field seasons and compiled data for five mass graves within four different provinces of Iraq.

This presentation will review the accomplishments of the Iraq Mass Graves Investigation Team, highlight innovative analytic techniques and demonstrate how anthropological and archeological forensic sciences can serve the cause of bringing alleged criminals to justice. Presented in three related parts, details will be offered to illustrate the design and implementation of the program to excavate, analyze and report on mass graves in Iraq; the processes and capabilities developed to perform field forensic services for the treatment of human remains; and, an assessment of the products and outcomes resulting from the mass graves forensic science team investigations.

Views and opinions expressed in the presentation are those of the author and do not necessarily reflect official positions or policies of the Corps of Engineers, U.S. Army or Department of Defense.

Public Archaeology in the War Zone

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Public archaeology is today a commonplace—in the United States and Europe. This concept, however, is new to the Middle East. This paper discusses a project that addressed the contentious past in Israel and Palestine through the implementation of public archaeology programs. Much of our methodology was derived from the kind of programs that William Gardner both participated in and instituted. Surprisingly, even

against a background of unceasing conflict, both the Arab and Jewish participants came to recognize their mutual involvement with the different voices in the communities in which they worked. Within the context of this common ground, the participants discovered many other areas of both agreement and disagreement. The prevailing spirit of the project eventually came to be one of cooperation. Symbolic of this spirit was the successful effort by project participants to save an ancient settlement from destruction by the wall being constructed through the West Bank by Israel.

Location, Location, Location: The Archaeology of Prime Fishing Site Selection

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The exploitation of the migratory fish resource has long been regarded as important to the prehistoric inhabitants of the Delaware Valley. What has received little attention, however, is a consideration of the selection process for suitable locations to conduct fishing related activities in the past. This paper presents a survey of the various factors that may have influenced the placement of prehistoric fishing sites in the Delaware Valley. The Abbott Farm National Historic Landmark is then evaluated for the suitability of its location for the exploitation of the migratory fish resource.

Climatic Change and Landscape Evolution Associated with Population Evolution in the Last 12, 000 years.

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Several explanations have been advanced for short but marked reversals in the generally warming trend during the Holocene. An interruption in oceanic circulation caused by a sudden outpouring of a vast amount of fresh water from periglacial Lake Agassiz onto the North Atlantic has been postulated as the cause of the sudden onset of a 1500 year-long cold period starting about 12,900 YBP. The traditional explanation for the outpouring has been that a combination of down-bending of the crust by the weight of the continental ice mass to the north and rebound of the land to the south, trapped the melt water in a huge lake whose rising waters eventually reached the eastern lip of the depression and flowed out, carving the St Lawrence causeway. Lately a theory has been

advanced that perhaps the outpouring was caused by a meteor impact at the onset of the Younger Dryas cold interval.

Regardless of the cause of this and later climatic fluctuations, such as the *8.2 ka event* (a 200-400- year cold drought), the variations in precipitation and temperature affected the surface geologic processes. These in turn determined the availability of types of lithic resources, the fauna and flora available for sustenance, and the rates of sedimentation in the Shenandoah Valley and Savannah River Valley. Observations in archeological sites at these locations provided the main support for this communication. *Jasper* became exposed only during a short window in time, during *Paleo-Indian time*. As climate ameliorated, during the *Archaic Cultural Time*, deciduous vegetation and thick underbrush covered the outcrops, trapping debris moving down slope and sediments brought by over bank floods. The stability of the debris and sediments permitted the development of soil horizons, described by John Foss. Chronologically, the soil horizons accumulated and developed *pari-passu* with the upward growth of the column of sediments during the *Archaic* and later (*Woodland*) occupations. Long periods of drought in Archaic time, such as that of the *8.2ka event*, evidenced by the nature of sedimentary packets in the floodplains, induced changes in projectile points. A shift to longer, thinner and more carefully manufactured projectile points reflected, according to Gardner's suggestion, a renewed dependence on hunting – as compared to gathering – as an important part of the diet. Fauna would have become concentrated in the neighborhood of the remaining water holes and low streams in the long periods of aridity.

Variations in lithic resources and in the nature and availability of food within limited environments could cause the cultural evolution observed in the last 12,000 years in these valleys of the Mid Atlantic region. No exogenous additions to the tool armory by either trade or by invasions of human contingents would be required. The changes would represent steps in a continuum of cultural adaptations that occurred *in situ*, in response to fluctuations in climate and surface processes.

Formation of Hearth Basin Features: Implications for the Interpretation of Archaeological Sites in the Middle Atlantic Region

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Shallow basin features interpreted as hearths are part of the archaeological record of Paleoindians and later Native American cultures in the Middle Atlantic Region of the Eastern United States. Many of these features contain reddened (“burned” or oxidized) sediments, and charcoal or darkened/charred organic material. The formation of such features has never been critically addressed, in particular: the amount of time required to alter the sediments in the feature; and the possibility that heat from a surface fire could be responsible for creating a subsurface, basin-shaped anomaly containing oxidized sediments and charred organic material that could be mistaken for an intentionally created pit feature. Experiences and experiments with surface fires provide information on the amount of time required to alter the color of sediments of specific textural classes, and address the possibility that surface fires can create subsurface anomalies that could be mistaken for intentionally created basins in which fires were built and maintained.

An Archaeological Perspective on Native American and European Contact

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While many scholars and disciplines have promoted our view of the time and relevant issues through the use of documents, historic, ethnohistoric, and ethnographic sources, my focus is upon the archaeological expression of events. For years the archaeological study of native peoples during the contact/historic period has been hampered by our assumptions of what relevant sites or deposits should look like - loaded with trade goods, and structurally different from their prehistoric precursors. Setting aside these assumptions and giving closer attention to archaeological systematics, has changed this situation. This paper emphasizes an archaeological perspective on Native-European contact, using research in the Delaware valley as an example.

Stone tool and ceramic technologies of Late Woodland/late prehistoric times (post 900 AD) persist through the 17th century and into the 18th century, and are used in conjunction with European-made implements gained in trade. Items gained in trade are integrated into longstanding native technologies and the social relations in which they are embedded. Trade goods, whether of a practical, social, or ideological nature, are integrated into the systems within which traditional material culture continues to function. European trade goods are heavily curated and recycled, finding their most visible archaeological expression in Native American burials. In some respects trade goods seem to provide symbolic equivalents to late prehistoric grave goods. However, in many cases the nature and number of grave goods with a European origin reveals a shift in pre-contact native mortuary practices. Mortuary features of the Contact period and historic times, as a group, contain more grave goods, and goods of a more varied nature, than mortuary offerings associated with internments of the 1000 years pre-dating contact with Europeans. This pattern in the use of European-made goods is one of the major reasons that archaeological surveys have failed to identify Native American settlements and activity areas dating to the time of contact with Europeans. Because such sites (excluding mortuary features) contain relatively few European goods, they are often mistakenly associated with the Late Woodland or late prehistoric period. The size and organization of individual settlements remain consistent through time, as do an economic reliance on farming and fishing. However, the location and environmental setting of settlements, and where economic activities take place, shifts by the 18th century.

Small Upland Sites in the Dowdy Creek Watershed, New River Gorge National River, Fayette County, West Virginia

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All of Bill Gardner's classes at the Catholic University of America had a heavy emphasis on human-land relationships. Most of his CRM projects, even the smallest ones, provided a context for the survey results within the broader settlement system. Apparently, some of his influence actually rubbed off... The Ottery Group conducted an archeological survey of the Dowdy Creek watershed within the New River Gorge National River (NERI), Fayette County, West Virginia. The study was performed for the NPS in order to identify and interpret the spatial patterns of prehistoric activity within the upland portion of the Dowdy Creek watershed and the use of GIS data to examine correlations between environmental variables and archeological site locations. The upland survey identified 96 open

terrestrial loci, of which 14 contained prehistoric cultural material. A reconnaissance of geological outcroppings associated with Pineville and Raleigh sandstone formations was also performed to document rockshelters. This paper will explore the observed upland patterns of prehistoric land-use in the NERI and how small, ephemeral lithic scatters are reflective of various aspects of settlement systems.

Interdisciplinary Archaeology in the Compliance Environment

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The work at Thunderbird and surrounding sites was one of the earliest, successful examples of interdisciplinary archaeology conducted in Virginia. A similar approach was used at the Brook Run Quarry, where the research team included archaeologists, a geoarchaeologist, geologists, a palynologist, an archaeobotanist, a phytolith analyst, and experts in INAA. The site consisted of late Paleoindian and Early Archaic deposits that date to just after the onset of the Holocene Epoch, i.e., Cal BP 11,500-10,500. Excavations at the site resulted in the discovery of a fault in the local country rock. The jasper in the fault represents the remains of a fossilized hydrothermal vent, which was mined for jasper nodules, which were then reduced to transportable cores. Two hearths were identified during the excavation and consisted of burned siltstone and rocks, jasper debitage, jasper core fragments, and wood charcoal. Botanical remains recovered include taxa that are characteristic of northern boreal forests.

Soil and Landscape Modifications During the Younger Dryas Chronozone and the Demise of Clovis: Evidence from Cactus Hill, the Delmarva Peninsula, and Shawnee Minisink

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Reversing a several thousand year trend in climate amelioration subsequent to the Last Glacial Maximum, the onset of the Younger Dryas (YD) event at about 10,950 rcybp marked an abrupt return to frigid conditions of the late Pleistocene across much of North America. What

triggered the YD is somewhat in dispute, but its close conjunction with what is widely accepted as the terminus of the Clovis tradition suggests a causal role in the demise of this culture. Such conjecture is supported by soil stratigraphy and landscape evolution in association with late Pleistocene and early Holocene cultural records at the three locations addressed. Soil profiles on the Delmarva Peninsula and at Shawnee Minisink each contain culturally sterile zones corresponding to the YD. These zones represent periods of rejuvenated sedimentation likely reflecting regional landscape instability due to the sudden emergence of the harsh YD climate. Resting atop Clovis levels, the sterile zones were amassed before the post-YD (ca. 10,150 rcybp) arrival of Early Archaic groups. Stratigraphic separation of Paleoindian and Early Archaic periods is less pronounced in Cactus Hill profiles, but differences in areal occupation patterns indicate major changes in the landscape during the YD.

Giving It Back: The Thunderbird Public Education Legacy

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After several years of intensive archaeological research on the Flint Run Complex, Bill Gardner and students created the Thunderbird Museum as a point of contact and education for the public. A pioneering facility in public education and archaeology, the Museum directly engaged visitors of all ages in archaeological discovery and interpretation through site visits, educational programming, and community outreach. While in operation, the Museum served thousands of visitors and trained a generation of Catholic University students in the methods of conveying archaeology to the general public. One of the Museum's legacies is the elaboration of a simple idea that has become a mantra for many of us: archaeologists have a duty to give back to the public. This presentation by the Museum Director Emeritus offers an overview of the Thunderbird public education model and reviews some of the on-going projects, from the Middle Atlantic to Southern Italy, that carry on the legacy of the small museum in Limeton, Virginia.

Lockhart: A Quarry Related Site in the Flint Run Paleoindian Complex

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The Lockhart site (44WR20) is one of several Paleoindian/Early Archaic sites in the Flint Run complex. Situated along Flint Run across the Shenandoah River from the Thunderbird site, the site was test excavated as part of a Masters thesis project. It represents a quarry-related site which is one of the four principal Paleoindian site types proposed by Gardner, i.e., base camps, processing stations, quarries and quarry related sites. At Lockhart, jasper from outcrops just downstream was initially processed and worked into early stage biface forms. Materials recovered from site excavations revealed an array of large quarry blanks, hammerstones, and early stage bifaces that were fashioned from the local jasper. Initial testing on the Pleistocene terrace revealed an extremely dense deposit of quarry related debris and systematic augering subsequently revealed more deeply buried early Holocene deposits that included an Early Archaic living floor about two meters below surface. A description of the Early Archaic component is described along with its relationship to the other Flint Run complex sites.

The Barton Site: Paleoindian and Early Archaic Occupation in the Upper Potomac Valley

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Investigations along a section of floodplain in the North Branch of the Potomac River Valley have revealed a sequence of occupations that date to as early as the Paleoindian period. A suite of radiocarbon dates documents a stratified series of living floors in a 2.5 meter deep section extending to depths of the late Pleistocene age river bed. The deepest components include an Early Archaic component marked by serrated projectile points underlain by tightly defined chipping clusters adjacent to a hearth. Artifacts recovered from the deepest occupation include scrapers, unifacial flake tools, biface fragments, and outrepassé flakes. The deepest cultural stratum and a buried A horizon just above it extends for at least 200 meters along the Potomac River. Excavations conducted to date are described along with surface finds of Paleoindian artifacts in the vicinity.

Modeling an Archaic Population History

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Archaeologists devise culture histories to synthesize complex archaeological data into meaningful portraits of the regional culture complexes they are studying. Most culture histories are framed with respect to several salient attributes, including social organization, subsistence, technology, ritual practice, and demographic patterns. Although these features are largely interlinked, some are more accessible than others within the archaeological record. Population patterning is among the less accessible elements, but has nevertheless become an important variable for understanding cultural evolution and social dynamics and is often framed with respect to climate and ecology. Ideally, population studies should provide a context with which hypotheses concerning the relationships between population, subsistence, settlement, and social organization may be formulated and tested. Instead, generalized population curves are commonly built from impressionistic observations and become embedded in the culture history narrative. For the Middle Atlantic this entails a trend of continual population growth throughout the Archaic Period that gradually promotes greater residential stability and intensification of resource procurement, culminating in the advent of food production.

Guided by Bill Gardner's holism, the work presented in this paper explores the complex human ecology of Archaic Period hunting and gathering groups, while considering factors such as population density and growth, social organization, and patterns of mobility and land use to evaluate some longstanding impressions regarding the population history of the Middle Atlantic. The research also implements an empirical methodology grounded in settlement demography and applies the theoretical principles of population ecology to construct context specific population patterning.

POSTERS

Emerging Patterns in Chesapeake Archeobotany

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Our research into Native American plant use in the Chesapeake has focused on scrutiny of existing archeobotanical data and re-analysis of old collections using new techniques. A suite of new (direct) radiocarbon dates on maize and beans generated by this research clarifies the timing and pathways of Mesoamerican cultigen adoption in the region. Our related investigation of pre-maize horticulture and husbandry of estuarine plant resources has included analysis of starch grains from ceramics, stone tools, and soils. This poster summarizes the results of the Chesapeake Archeobotanical Data Base Project to date. This research has called into question the existing sequence for the development of horticulture in the region and explored a revised chronology for the adoption of maize agriculture that differs markedly from other areas of the Eastern Woodlands.