When first defined by John Witthoft in 1953, the Transitional Period was characterized by broad bladed bifaces, cache blades, steatite bowls, consistent evidence of trade, distinctive lithic preferences, the initial appearance of ceramics, and adaptations with a riverine focus. Large fire cracked rock features, a curated lithic technology, an emphasis on a staged, bifacial lithic reduction strategies, and in some areas, burial ceremonialism, have been added to this list. Some researchers have linked the appearance and development of these characteristics to environmental change, specifically the warm/dry conditions of the Sub-Boreal climatic episode. The adaptive significance of the material culture and cultural/social behaviors of the time remains unclear, and other interpretive perspectives remain to be explored more thoroughly.

This period represents a time of change, but is it any more rapid or dramatic than previous or subsequent changes? What are the cultural historical contexts from which the things that we consider to be transitional emerge? And what are the processes of change that we believe we are detecting in the archaeological record? This collection of papers examines some of the foundational evidence relevant to the time, and the degree to which trends can be defined for Pennsylvania and the broader Middle Atlantic Region. Their implications and the frameworks that could be profitably used in crafting interpretations of social and cultural change will be examined.

Session papers will be followed by 10 minute discussion periods.

Moderator - Michael Stewart

1:00 pm – 1:30 pm Problems, Problems, Problems: Working with the Archaeological Record of 3000-4000 BP, by Michael Stewart, Temple University

1:30 pm – 2:00 pm Evidence for Climatic Variability During the Sub-Boreal/Transitional Period: Fact or Fiction, by Frank Vento, Clarion University

2:00 pm – 3:30 pm Settlement Patterns, Lithic Preferences and Cultural Adaptations

During the Transitional Period, by Kurt W. Carr, The Pennsylvania Historical and Museum Commission

2:30 pm – 3:00 pm The Transitional Archaic of the Susquehanna Valley, by Patricia Miller, KCI Technologies, Inc.

3:00 pm – 3:15 pm Break

3:15 pm – 3:45 pm Rethinking the Terminal Archaic in Pennsylvania: Hearth, Fish and Pottery, by Roger Moeller, Archaeological Services

3:45 pm – 4:15 pm An “Orient” Perspective on the Transitional Archaic in the Delaware Valley, by Joseph Blondino, Temple University

4:15 pm – 4:45 pm Archaic Settlement Demography and Population Ecology Focus on the...
The Comfort Inn
9:00 pm - Midnight Hospitality Suite

The Fort LeBoeuf Site: An Unexpected Journey Into Public Archaeology, by Renata B. Wolynec, Edinboro University of Pennsylvania and the Fort LeBoeuf Museum

Fortifications at the Forks of the Ohio: Fort Duquesne, Pittsburgh and Fort Pitt, by Brooke S. Blades, A.D.Marble & Company

Madame Montour’s Osstonwakin and the Long Peace: Colonial Encounters at the Eve of the French and Indian War, by Mary Ann Levine, Franklin and Marshall College

The History of Archaeological Research at Fort Augusta, Pennsylvania’s Largest French and Indian War Period Fort, by James A. Delle, Kutztown University

2:30 pm – 2:50 pm Break

2:50 pm – 3:05 pm Break

3:05 pm – 3:25 pm Archaeology Month 2008 at Fort Hunter, by James T. Herbstritt, Kurt W. Carr and Douglas C. McLearen, Pennsylvania Historical and Museum Commission

In Search of the Elusive Fort Morris, by Stephen G. Warfel

Frontier Defenses in Virginia During French and Indian War, by Greg Adamson

Tour of Museum Gallery and Archaeology Lab

Wine & Cheese Reception Memorial Hall

Dinner Banquet & Annual Awards Memorial Hall

Program Guest Speaker: Bruce Bomberger, Curator, Landis Valley Museum - French and Indian War Period Forts

In the mid 1990s, while working in the PHMC’s Bureau for Historic Preservation, Bruce Bomberger received the task of surveying the likely remains of the State’s sites associated with the French and Indian War and co-producing a reference booklet on its findings. This undertaking was spearheaded by a grant from the America’s Industrial Heritage Project, a program targeting the Rust Belt of southwestern Pennsylvania to encourage history tourism. In a presentation at today’s meeting Bruce will outline the methodology he developed for that project, share some of the documentary images obtained and used to illustrate the published work, and highlight the major challenges and findings of the study. He will discuss the various types of fortifications and the British military roads.

Live Auction – Following Banquet Memorial Hall

9:00 pm - Midnight Hospitality Suite
The Comfort Inn

Sunday, April 5
MORNING SESSION
Moderator – Kurt W. Carr
The Archaeology of Penn’s Woods, Part 2

9:00 am – 9:20 am Update on the Indiana University of Pennsylvania Late Prehistoric Project, by Beverly A. Chiarulli and Sarah W. Neusius, Indiana University of Pennsylvania

9:20 am – 9:40 am More New Perspectives on the Johnston Site: The 2008 Excavations, by Sarah W. Neusius and Beverly A. Chiarulli, Indiana University of Pennsylvania

9:40 am – 10:00 am Late Woodland/Late Prehistoric Rockshelter Use, by Paul A. Raber, Heberling Associates, Inc.

10:00 am – 10:15 am Break

10:15 am – 10:35 am A Preliminary Assessment of Prehistoric Occupation at the Forks of the Ohio, by Brooke S. Blades, A.D. Marble, Pat Fall, William Johnson, and Frank Vento, Clarion University of Pennsylvania.

10:35 am – 10:55 am It’s About Time! A Chronological Assessment of the Late Prehistoric Villages at Fishbasket, by Ken Burkett, Jefferson County History Center

10:55 am – 11:15 am Final Excavation Results from the Lemoyne Borough Memorial Park Site (36Cu194): A Washington Boro Stage Susquehannock Village in Cumberland County, Pennsylvania, by Andrew Wyatt, McCormick Taylor, Inc.

11:15 am Closing Remarks

Available PAC Session Abstracts

Carr, Kurt W. Settlement Patterns, Lithic Preferences and Cultural Adaptations During the Transitional Period

Withhoff proposed that the settlement patterns of the Transitional Period focused on riverine environments. He also proposed that in Pennsylvania, there were distinctive lithic preferences and a distinctive lithic reduction strategy during this period. This presentation will examine settlement patterns, patterns of lithic utilization and lithic technology for the Late Archaic, Transitional and Early Woodland Periods using data from the Pennsylvania Archaeological Site Survey files. These traits will be correlated with climatic changes resulting in a preliminary model for the evolution of cultural adaptations during this period.

Moeller, Roger Rethinking the Terminal Archaic in Pennsylvania: Hearths, Fish and Pottery

The Archaic is noted for having many local, specialized adaptations each with its own distinctive tool kits: Maritime, Piedmont, and Desert to name three. For some reason, Perkiomen, Susquehanna, and Orient are considered “cultures” continuing through the end of the Archaic and into the beginning of the Early Woodland. Some refer to these as part of the Terminal Archaic; others call this era Transitional. Although many topics will be discussed, the primary focus here will be on the classic presentation with huge hearths filled with fire cracked rock located on the floodplains of major rivers and their tributaries. The supposed function of these hearths was for the intensive processing of anadromous fish. If immense hearths were a necessary aspect of fish processing, what did the people do previously and subsequently? Answers will be sought using cultural ecology and economic anthropology.

Stewart, Michael Problems, Problems, Problems: Working with the Archaeological Record of 3000-4000 BP

This presentation introduces the session and outlines the various methodological, theoretical, and interpretive questions that confront researchers dealing with the archaeological record of the time.

Wholey, Heather A. Archaic Settlement Demography and Population Ecology Focus on the Terminal Archaic

A population model for the Virginia Archaic illustrates significant temporal and spatial variation in overall population density and local group size. While much of this variation is the product of adaptive responses in population growth rates, a good deal can also be attributed to other aspects of settlement demography, such as differing settlement patterns, mobility systems and land use routines that impact on archaeological visibility. Implementing concepts fundamental to population ecology, such as carrying capacity, migration and territoriality aid in the interpretation of manifest trends. Recent initial endeavors to apply this model to eastern Pennsylvania draws on watershed surveys conducted within the Susquehanna and Delaware sub-basins. Particular effort is made to address influences on apparent fluctuation in overall population growth, while focusing on the patterns evident for the Terminal Archaic.
SPA Meeting Abstracts

Adamson, Greg  Frontier Defenses in Virginia During French and Indian War

Shortly after Braddock’s defeat on July 9, 1755, Colonel Dunbar’s retreated with the remnants of the British army to Fort Cumberland in western Maryland and on to Philadelphia. The departure of the British army led settlers in western Maryland and along the Virginia frontier to the south exposed to Indian incursions. The defense of the Virginia backcountry settlements was left to scattered companies of militiamen and rangers. These citizen soldiers lacked the manpower, organizational structure, munitions and training necessary to repel the onslaught by Indian raiding parties. By years end, approximately 70 settlers had been killed within settlements near the northwestern corner of the Virginia frontier and hundreds of families fled frontier areas during 1756. To stabilize the situation and provide a refuge for the remaining settlers, governor Dinwiddie ordered George Washington, the newly appointed commander in chief of Virginia’s military forces, to start constructing a chain of forts along the western edge of the Virginia hinterland. Fort construction began late in the fall of 1755 and continued into the spring of 1757. This effort resulted in the construction of at least 22 military forts and hundreds of private forts. Historical and archeological research over the past 21 years has revealed much about the building techniques and materials utilized to construct some of these forts, particularly Ashby, Edwards, Hinkle, Loudoun, Pleasant, Mendenhall, Skidmore and Vannatter and many details about their architecture. In addition, eighteenth century documents and prisoner accounts in newspapers have revealed the identity of many of the tribes involved in raids on Virginia settlements and name of Delaware chiefs residing in Pennsylvania that lead some of the raids.

Blades, Brooke S.  Fortifications at the Forks of the Ohio: Fort Duquesne, Pittsburg and Fort Pitt

During the decade from 1754 to 1764, three fortifications were constructed on the point of land between the Allegheny and Monongahela rivers in western Pennsylvania. The French Fort Duquesne stood from 1754 until its abandonment and partial destruction in late 1758. British forces constructed a small fort that was known to them as “Pittsburg” in the winter of 1758-59 along the Monongahela River, but by the spring and summer of 1759 had commenced the much larger Fort Pitt. None of these fortifications were ever attacked directly, although Fort Pitt was besieged by Native Americans for a time in 1763. These fortifications were constructed as traditional artillery emplacements despite the limited role for artillery in this environment. Their true value lay in the protection provided to infantry but more importantly as supply points for Native Americans. Fort Duquesne served as a logistical center of support for Native American raiding parties and their families. The later forts initially maintained this relationship but increasingly provided the foundations for permanent British occupation of the Ohio Country.

Blades, Brooke S., Pat Fall, William Johnson and Frank Vento  A Preliminary Assessment of Prehistoric Occupation at the Forks of the Ohio

Archaeological monitoring and investigations at Point State Park in Pittsburgh during 2007 provided an opportunity to record important information relating to at least 8000 years of prehistoric occupation between the Allegheny and Monongahela rivers. Soil sediments and geochronology suggest the Holocene terrace between the rivers had built up approximately 20 feet between the end of the Pleistocene and the Middle’s 1952 model of the Late Prehistoric period. Pollen data argue for land clearance probably related to agricultural activities during the Woodland and Late Prehistoric periods. The survival of Woodland evidence at varying elevations indicates topographical diversity across the point.

Burkett, Kenneth  It’s about Time! A chronological assessment of the Late Prehistoric villages at Fishbasket

Continued excavations at the Fishbasket site complex along the Redbank Creek on the boarder of Clarion and Armstrong counties, Pennsylvania has revealed a succession of large villages which cumulatively span most of the Late Prehistoric period. Such a packed series of sites offers a unique and defining perspective of the evolution of these people and their place in a broader regional context. Utilizing settlement pattern comparisons, artifact analysis and radiocarbon dating results, this paper will present the chronological sequencing of these occupations and discuss both continued similarities and obvious cultural changes that occur here through time.

Carr, Kurt W., James Adovasio and Frank Vento  A report on the 2008 field investigations at the Shoop site

John Wittmayer’s 1952 analysis of the Shoop site was based on an unprovenienced surface collection that was recovered from eleven concentrations. Nearly all of the artifacts are made from Onondaga chert 350 kilometers to the northwest of Shoop. His research has had a huge affect on Paleoindian studies, especially the analysis of settlement patterns. This presentation will review the results of the first systematic excavation ever conducted at one of Wittmayer’s concentrations including the first comprehensive mapping; a lithic sourcing analysis and a description of over 800 provenienced artifacts recovered during 2008.

Chiarulli, Beverly A. and Sarah W. Neusius  Update on the IUP Late Prehistoric Project

The Johnston site (36In2) excavations are part of our larger effort to investigate archaeological sites in the three watersheds that cross Indiana County. The Conenough Blacklick, Loyalhanna, and Crooked Creek Watersheds all contain multiple Late Prehistoric/Late Woodland villages and through a systematic program of limited excavation, analysis of old collections, analysis of new samples and faunal and pollen samples from the Johnston site, we have gained new insights into the cultural dynamics in this region. Through the past year’s investigations, we have obtained new dates on the Tearing Run (36In59), Dividing Ridge (36In477), and Mary Rinn Sites (36In29) as well as for the Johnston site. In addition, other collaborators have conducted geophysical investigations at the Dividing Ridge site and analyzed botanical samples from six other sites. This presentation summarizes the results of our work.

Coppock, Gary F. and John M. Stittler  A Geoarchaeological Investigation of the Aughwick Creek Watershed: An Introduction

This paper provides an introduction to a geoarchaeological research project currently underway in the Aughwick Creek watershed (Watershed 12C) in south-central Pennsylvania. The study is being performed as an alternative investigation for two National Register of Historic Places sites (36Hu199 and 36Hu200) that were impacted by improvements to SR. 522 within the Blacklog Narrows in Cromwell Township, Huntingdon County. The goals of the research are: 1) to identify and describe the alluvial and colluvial landforms within the watershed to determine how and when they were formed; 2) to assess the paleoenvironment of the watershed and how it changed through time by studying soil development and sedimentation rates, pollen, and plant remains; and 3) to create an archaeological sensitivity map of the watershed based on the soil characteristics and paleoenvironmental data. A geographic information system (GIS) will be developed to graphically display the data and results. The research will not only be useful for interpreting archaeological sites in the region, but will also serve as an important planning tool for PennDOT and other agencies. The results will help developers avoid archaeological sites (and thus minimize related costs) when designing construction projects within the Aughwick Creek watershed and similar settings in south-central Pennsylvania. It is anticipated that the project will be completed in the fall of 2009, after which detailed results will be presented.

Cresson, Jack  A Case for Prehistoric Fog: A New Wrinkle on North American Flaked Technologies

North American flaked lithic technology is, for the most part, underpinned by simple, straight-forward percussion and pressure techniques. Except for key phrases in the Paleoindian and Broadspur Periods, wherein the use of grinding in the production of flaked lithic items was principally confined to specialized technologies applied to small areas, e.g. platform preparation and dorsal ridge abrasion; the practice and use of more complete grinding of surfaces and edges as a viable mechanism to improve and enhance the flaking process has no precedent. Until now! Grooving, as a surface treatment in prelude to finishing-in-the-mode and parlor of modern lapidary flint knapping is known as “flake over grind” technique or FOG. This paper unravels the use of grinding as observed in the Growswater Phase of the Paleo-Eskimo Tradition from the Maritime Provinces of Newfoundland and Labrador. Grinding surfaces and edges in bifacial production is an unknown practice in this hemisphere but has been recorded in several Old World contexts, (1) within the Scandinavian Neolithic and (2) the Pre-Dynastic Egyptian Chalcolithic Periods. Its punctuated occurrence, within a typologically ambiguous assemblage, is roughly analogous to the Eastern Region-Early/Middle Woodland Period- is indeed enigmatic with no known antecedents. Archaeological data from sites in Labrador and Newfoundland along with experimental research findings will be advanced to make a unique case for a New World, Old World Neolithic production system.

Delle, James A.  The History of Archaeological Research at Fort Augusta, Pennsylvania’s Largest French and Indian War Period Fort

Fort Augusta was built in 1758 not as a direct action, Fort Augusta played a crucial role in fortifying the Susquehanna Valley during the French and Indian War. Located in the modern city of Sunbury, near the historic village of Shamokin, Fort Augusta was the largest colonial-period fort built in Pennsylvania. Despite the fact that the site is located in an urban area, a number of archaeological investigations have been done at the site.
These include WPA excavations in the 1930s, and a series of salvage/mitigation excavations completed in the 1970s, 1980s, and most recently in 2005-06. This paper synthesizes this work to report on the history of research at Fort Augusta.

**Fritz, Brian L.**  *Old Dirt Along the Clarion River: Evidence of Ice Wedge Casts in Alluvial Soils and the Potential for Discovering Preserved Late Pleistocene Habitation Sites.*

Archaeological investigations of alluvial soils along the Clarion River in Elk County, Pennsylvania have revealed soil features that resemble ice wedge casts and patterned ground that are generally associated with periglacial conditions. These soil features, along with three bulk soil AMS dates, suggest that this alluvial landform was stable during the Late Pleistocene. Stable alluvial surfaces dating to Clovis and pre-Clovis times are exceedingly rare. If the age interpretations of the soils and sediments prove to be correct then this location may provide one of the best opportunities for discovering preserved evidence of early Paleo-Indian occupations within Pennsylvania.

**Herbstritt, James T., Kurt W. Carr and Douglas C. McLearen** *Archaeological Monuments 2008 at Fort Hunter.*

Fort Hunter Park is a public recreation area sitting high above the Susquehanna River in Dauphin County, Pennsylvania. The park’s name refers to a French and Indian War supply fort that once sat within the park boundaries. Although historical records strongly suggest that the park is indeed the correct location, the actual fort remains have not been identified archaeologically. Over the past three years, Pennsylvania Historical and Museum Commission archaeologists have conducted excavations to locate these features, and now introduce Pennsylvania’s rich archaeological heritage to the park’s visitors. With the assistance of an enthusiastic group of committed volunteers, this program of “public outreach” demonstrates how professional and non-professionals can work together to share in the discovery of the past. Although the fort’s blockhouse and fortification(s) have yet to be identified, numerous artifacts spanning a period of over 9,000 years were recovered. In addition, features and artifacts from the 18th century (including the fort period) were identified. A second aspect in this presentation will focus on the artifacts and their relationship to the Fort Hunter site.

**Levine, Mary Ann** *Madame Montour’s Otstonwakin and the Long Peace: Colonial Encounters on the Eve of the French and Indian War.*

The Long Peace established by William Penn stretched from the colony’s founding, until the mid-1750s. After 1750, Penn’s Woods witnessed considerable bloodshed as the colonial landscape was forever transformed. This paper examines early 18th century colonial encounters just prior to the French and Indian War by focusing on one recently re-discovered village—Otstonwakin—and its leader—Madame Montour. Madame Montour, a woman of Native and European descent, served as a translator to colonial governments, worked as a frontier diplomat, and provided leadership to a multinational Native American village. Through the use of both ethnohistoric documents and the tangible world of material objects, this paper considers the significance of both Otstonwakin and Madame Montour in the last decades of the Long Peace.

**McConaughy, Mark A.** *The Rest of the Story of Sugar Run Mound (36Wa359), a Hopewellian Squawkie Hill Phase site, Warren County, Pennsylvania.*

Sugar Run Mound (36Wa359) was a Squawkie Hill Phase Hopewellian burial mound located in Warren County Pennsylvania. The earliest burial phase included a central cist, a bird and possible celta effigies made from large stone cobbles. Multiple cremations were interred under the features of Mound Unit 1. Mound Unit 2 consisted of two stone box tombs each containing an extended burial. Mound Unit 3 had an extended burial laid on the existing ground surface. The different modes of burial indicate the occupation of Sugar Run Mound changed through time. This paper explores those changes.

**Moeller, Roger** *Cultural Ecology on a Need to Know Basis.*

The essence of cultural ecology is to understand the interaction of human with and within their environment. Through time cultural adaptation has enabled humans to become less dependent on the vagaries of temperature, precipitation, or 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 now we have blended all this into a cultural ecology of prehistoric societies. Although we give lip service to the concept of cultural ecology, are we really utilizing these implicit and explicit concepts to the maximum extent possible?

**Neusius, Sarah W. and Beverly A. Chiarulli** *More New Perspectives on the Johnston Site: The 2008 Excavations.*

In the summer of 2008, the IUP Archaeological Field School conducted additional excavations at the Johnston site (36IN2) as a follow-up on our 2006 test excavations. The 2008 excavations were placed to confirm the location of the double stockade and identify a house structure. Although we did not locate a house structure inside this stockade as we had hoped to do, we did excavate a major portion of the stockade trench full of refuse as well as many postholes and other features. The artifactual, faunal and ethnobotanical remains as well as carbon and soil samples obtained are now giving us a variety of new ideas about the nature of this site and the number of components it contains.

**Oshnock, Robert** *The Consol Site (36Wm100) A Monongahela Drew Phase Village.*

Members of the Westmoreland Archaeological Society (WAS), Chapter 23 of the Society for Pennsylvania Archaeology are currently conducting excavations at the Consol site in Western Pennsylvania, in Westmoreland County, on a high hilltop along the mainstem of the Youghiogheny River. Five stockade lines of this Monongahela Drew Phase, Late Pre Historic village along with 28 roundhouse patterns have been exposed and documented. Drew decorated pottery will be examined along with other Early and Middle Monongahela Drew phase artifacts. Projectile points and chert tempered pottery are indicating an organized village existed here and was first occupied in the woodland time period. It has probably taken our 8 man field crew long to excavate this Monongahela Drew site than they actually lived in the village.

**Paul A. Raber** *Late Woodland/Late Prehistoric Rockshelter Use.*

The latest stages of prehistory in the Northeast and Middle Atlantic witnessed a marked and widespread increase in the use of rockshelters. Archaeologists throughout the region have noted the phenomenon but failed to provide a convincing explanation. I examine several possible reasons for Late Woodland/Late Prehistoric peoples may have spent more time at rockshelters and present a case study from Mykt Rockshelter, 36Hu143, in central Pennsylvania.

**Warfel, Stephen** *In Search of the Elusive Fort Morris.*

Where in the world is Fort Morris? This question has hung like a cloud over the Shippensburg community for more than a century. Local and state authorities have identified three locations as the site of the French and Indian War period defense work, defying logic and a fundamental law of physics. Learn how renewed documentary analysis, historical geography, and archaeological testing are integrated to unravel the mystery of Shippensburg’s colonial past.

**Wolynec, Renata B.** *The Fort LeBoeuf Site: An Unexpected Journey into Public Archaeology.*

In 1975, Edinboro University of Pennsylvania embarked on a multi-year search for remains associated with the French Fort sur la Rivière aux Boueufs, destination of George Washington’s first mission as an officer in 1753 and last diplomatic skirmish before the beginning of the French and Indian War. Complicating the problem was the multi-component nature of the site which included not only the French Fort, but a smaller British Fort, an American blockhouse, and the American community of Waterford, PA. It was the beginning of a 34 year journey into archaeological discovery through the unexpected medium of public archaeology.

**Wyatt, Andrew** *Final Excavation Results from the Lemoyne Borough Memorial Park Site (36Cu194): A Washington Boro Stage Susquehannock Village in Cumberland County, Pennsylvania.*

With data recovery excavations completed in August 2008, the Lemoyne Borough Memorial Park site (36Cu194) represents the northernmost known Susquehannock village in the lower Susquehanna Valley. Provisionally dated to the Washington Boro stage of the traditional Susquehannock chronology (circa 1600-1625 A.D.), the investigated portion of the site contained a palisade, at least one partial longhouse pattern, and numerous refuse-filled pits. This presentation updates the preliminary excavation results reported at last year’s conference, and will focus on the most prominent European trade item and pottery assemblages with those recovered from the Schultz and Washington Boro village sites farther south in Lancaster County. Aspects of the site’s internal patterning suggest a shorter occupation span than either of the Lancaster County villages.