



Conference on New England Archaeology

CNEA provides an annual conference to discuss theoretical issues in New England archaeology.

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Emerging Trends in Paleo Indian Interpretation

April 14, 2012 Strawberry Banke, Portsmouth, NH

Due to a number of recent and very exciting discoveries, as well as the development of new and the refinement of existing methodologies, we have chosen to focus this year on Emerging Trends in Paleo Indian Interpretation. Given the theme of the meeting, we have also chosen to take this opportunity to celebrate the contributions of Dr. Dena Dincauze to the field, and we dedicate this meeting to her. Over ten years ago, Dena wrote for the National Park Service publication *Common Ground* on the earliest Americans in the Northeast, which she so aptly hoped would serve to “open discourse about northeastern Paleoindians and stimulate consideration of alternative interpretations of new evidence” (see page 12).

Conference Schedule

- 9:00-9:30 Coffee
- 9:30-9:45 Greetings and Introduction: D. Doucette, Chair
- 9:45-10:00 Dedication to Dena Dincauze: E. Chilton
- 10:00-10:30 *Paleoenvironmental Variability during the Younger Dryas Climate Oscillation in Northeastern North America*. Paige Newby, J. Lothrop, R. Boisvert, A. Spiess and J. Bradley
- 10:30-11:00 *Looking at Late Pleistocene Occupations in the New England-Maritime*. Jonathan Lothrop (New York State Museum), A. Spiess (Maine Historic Preservation Commission) and J. Bradley (Archlink)
- 11:00-11:30 *Waters Around You Have Grown: New Insights into Early Occupation of the Formative Narragansett Bay Drainage*. Alan Leveillee, PAL
- 11:30-12:00 Questions
- 12:00-1:15 Lunch
- 1:15-1:45 Business meeting
- 1:45-2:15 *Chert and Rhyolite Sources for Artifacts in New England Archaeological Sites*. Stephen G. Pollock, Department of Geosciences, USM
- 2:15-2:45 *Jefferson VI - A newly defined component of the Israel River Complex*. Richard Boisvert, State Archaeologist NH
- 2:45-3:15 *Gender and Task Differentiation at the Tenant Swamp Site (27CH187), Keene, New Hampshire*. Robert G. Goodby (Monadnock Archaeological Consulting, LLC and Franklin Pierce University)
- 3:15-3:45 Discussion
- 3:45-4:00 Adjourn to Discovery Center
- 4:00-6:00 Reception



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Conference
Presentations

Paleoenvironmental Variability during the Younger Dryas Climate Oscillation in Northeastern North America

Paige Newby, Jon Lothrop, Richard Boisvert, Arthur Spiess and James Bradley

Was the variety of regional paleoenvironmental changes associated with the Younger Dryas climate oscillation intrinsically linked with the rapid spread of Paleo Indians groups across North America? Here, we examine this question in the Northeast, a region ideal for examining possible effects of abrupt climate change because the close proximity of the Laurentide Ice Sheet and the North Atlantic Ocean made the region's climate system sensitive to rapid changes in these features. We first review previous work within the Northeast that shows how changes in vegetation associated with the YD likely favored migratory animals potentially sought by humans. We then examine new paleoenvironmental evidence with recent North Atlantic climate proxy data, which indicate an abrupt onset and exit to the oscillation, and some variability during the 1300-yr interval. Our data show intervals of low moisture at the onset and during the YD in the southern New England, which contrast with predominantly moist conditions in the southern mid-West. Pollen data indicate cool climate conditions that extended as far west as Indiana between 13.0 and 12.5 ka, which changed after 12.5 ka as unique "no-analogue" vegetation assemblages emerged during the YD. At the end of the YD, changes in regional vegetation show a decline in spruce (*Picea*) abundance as pine (*Pinus*) and oak (*Quercus*) migrated into the Northeast, in contrast to the replacement spruce, sedge (*Cyperaceae*) and ash (*Fraxinus*) with oak and elm (*Ulmus*) in the southern mid-West. We infer that such variable landscape patterns and changes in moisture balance resulted in changing resources across the broader region that likely impacted relationships between humans and biota.

Looking at Late Pleistocene Occupations in the New England-Maritimes

Jonathan C. Lothrop (New York State Museum), Arthur E. Spiess (Maine Historic Preservation Commission) and James W. Bradley (Archlink)

This paper reviews archaeological evidence for human occupation of the New England-Maritimes (NEM) during the late Pleistocene and early Holocene in relation to climatic and environmental changes from circa 13,000 to 10,000 calendar years before present (Cal BP). In some regions of North America, researchers suggest that ecological changes associated with onset of the Younger Dryas (YD) climatic reversal at circa 12,900 Cal BP disrupted regional biota, causing the demise of Clovis/early Paleoindian cultural adaptations. In the NEM, sudden cooling at the YD onset fostered more open habitats favorable to caribou, and may have encouraged Paleoindian colonization of this deglacial region. Sequencing of Paleoindian point forms and analysis of associated radiocarbon dates suggest that fluted point groups occupied the NEM during, but not after, the YD. Abrupt warming at the YD terminus (11,700/600 Cal BP) caused a rapid reorganization of the region's vegetation and prey species populations. Against this backdrop, we use relative and absolute chronologies and locational data for sites to look at Paleoindian colonization and land-use across the NEM, from the YD into the early Holocene. Over the same span, we also examine evidence for changes in biface forms and toolkit composition. Data on Paleoindian



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Presentations
(cont.)

occupations in the neighboring eastern Great Lakes provide a useful foil for considering explanatory hypotheses, and for suggesting future research avenues.

Waters Around You Have Grown: New Insights into Early Occupation of the Formative Narragansett Bay Drainage

Alan Leveillee, PAL

Recent CRM survey and re-examination of museum collections demonstrate a strong riverine PaleoIndian presence prior to the formation of southern New England's Narragansett Bay. Recent discoveries provide opportunity to add significant data and expand our temporal and cultural perspectives.

Chert and Rhyolite Sources for Artifacts in New England Archaeological Sites

Stepher G. Pollock, Department of Geosciences, University of Southern Maine

Fine grained rock such as chert, rhyolite, and argillite have been extensively used in the manufacture of stone tools recovered from various archaeological sites throughout northeastern North America. Numerous fluted point Palaeo American sites contain significant numbers of chert artifacts whose origin is from the Munsungun Lake Formation in northern Maine. Similarly, these cherts are recovered from sites as young as Woodland. Other chert sources for artifacts include those cherts which crop out in eastern New York, such as the outcrops at West Athens Hill and Flint Mine Hill near the village of Coxsackie, New York, Vermont, Quebec, New Brunswick and Nova Scotia.

Several forms of rhyolite are also found in Palaeo American through Woodland archaeological sites. Rhyolite sources include those from northern Maine, such as the Kineo Rhyolite, from coastal Maine, such as the Vinal Haven rhyolite, New Hampshire such as the Mount Jasper and Jefferson sources, and from Massachusetts such as the Saugus rhyolite. Well developed classification hierarchies allow one to assign the artifact to a source. Assignment to source should utilize a combination of comparison with known or probable sources with the artifact in question. The range of criteria need to include rigorously established hand specimen characteristics, polarized light microscopy, mineralogical analysis using X-ray diffraction and chemical analysis to include both major and minor elements. The serendipitous co-occurrence of outcrop with archaeological site is a bonus and should be used when at all possible. Examples in the northeast include numerous archaeological sites proximal to chert outcrops at Munsungun Lake, the Mount Jasper and Jefferson sites and outcrops in northern New Hampshire.



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Presentations (cont.)

Gender and Task Differentiation at the Tenant Swamp Site (27CH187), Keene, New Hampshire

Robert G. Goodby, Monadnock Archaeological Consulting, LLC and Franklin Pierce University

Four well-defined oval artifact concentrations representing house floors were excavated at the Middle Paleoindian Tenant Swamp site. Stone tool assemblages were dominated by processing tools, including scarpers, gravers, and pieces esquilles, with very few bifacial tools and little evidence for hunting or stone tool manufacture. Use-wear analysis indicated hide-working was the predominant activity. The Tenant Swamp loci strongly resemble those associated with women's activities at the Early Paleoindian Bull Brook site, reflecting previously unrecognized continuities in Paleoindian household organization and division of labor.

Jefferson VI - A newly defined component of the Israel River Complex

Richard Boisvert, State Archaeologist, Division of Historical Resources, New Hampshire

The Jefferson VI site was identified in July 2010 and intensively investigated in the summer of 2011. Initial data indicated that it is a low density site, strategically located on a primary vantage point overlooking the Israel River Valley in close proximity to other Paleoindian sites. Excavations have yielded a narrow range of tool forms and a broad range of lithic raw materials. Interpretations of site function and external contacts over substantial distances are presented and evaluated within the context of the site cluster known as the Israel River Complex.





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Research Abstracts ABSTRACTS

5–6 Lathrop Place in Boston, Massachusetts

Submitted by Kristen Heitert, PAL

PAL, under contract to the Paul Revere Memorial Association (PRMA), recently completed archeological investigations at 5–6 Lathrop Place in Boston, Massachusetts. The ca. 1835 building sits on land that was formerly part of the rear yard space for several structures fronting North Square, including the Pierce-Hichborn House (ca. 1711) and the Paul Revere House (ca. 1680), and is undergoing renovations for future use as an education and visitor center. The investigations focused on the investigation of a previously identified privy feature, and also resulted in the identification of a buried cobblestone walkway, a cistern, and the exposure of nineteenth-century drainage features. Thousands of artifacts dating from the eighteenth through twentieth centuries were recovered, and analysis is currently underway to develop a more detailed landscape history for the property, and how its occupants (both famous and not-so-famous) used that landscape over time.

Eel River and Jones River Dam Removals, Plymouth and Kingston, Massachusetts

Submitted by John Daly and Suzanne Cherau, PAL

have recently completed historic industrial and archaeological surveys and documentations of mill dam removals in Plymouth (Eel River) and Kingston (Jones River), Massachusetts. The dam removals were included in federally-funded projects designed to improve water quality, allow for anadromous fish passage, and restore wetlands and forest ecosystems. The surveys included subsurface testing of archaeologically sensitive areas around the nineteenth-century dams and extant industrial buildings or mill ruins, aboveground architectural survey and photographic documentation of the dam and mill structures, and monitoring/recording as part of mitigation during the dam removal construction work. In the case of Eel River, the mitigation effort during the contractor dam removal excavations documented aspects of the dam's internal construction and uncovered evidence in the form of buried structural features of earlier dams and associated industrial campaigns at the site. This significant archaeological data reinforced and informed interpretations of the site history based on documentary evidence, providing insight into the manipulation of the industrial hydropower landscape in response to changing local site conditions and evolving production demands. Additionally, the data provided specific information regarding the construction and engineering of water control features such as mill races, spillways, and other dam components.

The historic and archaeological findings from such dam removal and ecosystem restoration projects affirm the information potential and research value of historic industrial dam sites. Temporal and engineering analyses of these resources may be difficult based solely on their visible physical characteristics. The presence of early-nineteenth-century waterpower infrastructure contained within the Eel River dam in particular confirms that dam structures may be significant not only as historic resources in the present landscape, but as the living record of a continuum of industrial activities at the site that may only be suspected through the documentary record. Such records often provide vague information concerning the construction and manipulation of the industrial waterpower landscape through various periods of occupancy.



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Research Abstracts (cont.)

Archaeological recordation of a dam's internal structure allows for a more precise analysis of site chronologies and construction activities than visual and documentary evidence alone.

The historic and archaeological information potential of historic dams as vernacular engineering structures, regardless of their intended purpose (e.g., industrial waterpower, flood control, water supply, recreational), should be considered as part of all dam removal and river restoration efforts in New England. Many of these dams are reported to have fallen into disrepair and are considered threats to public safety and barriers to the survival of natural ecosystems. As dams are removed from riverine landscapes, the body of collected data will allow for a more thorough understanding of colonial and industrial period engineering methods. The data would be enhanced through or could be incorporated into statewide contexts for the thousands of dams reported to be present in the New England states.

Chepachet Mill Site, Glocester, Rhode Island

Submitted by Erin Timms and Suzanne Cherau, PAL

PAL recently completed Phase II archaeological investigations for the Chepachet Village Middle Privilege Archaeological Site (RI-2476) in Glocester, Rhode Island. The middle textile mill privilege was first used in the late eighteenth century to serve a tannery and a blacksmith shop, and was expanded in the early nineteenth century for a gristmill, distillery, sawmill, and cotton mill. These smaller mills were eventually replaced with large brick and stone factory operating under the name F.R. White Co. The factory's operations expanded to include worsteds production and several large mill additions, employing over 400 workers, some of whom lived in worker housing near the factory site. The complex was the largest industry in Chepachet until it was destroyed by fire in 1897.

The archaeological investigations were focused on the worker housing component of the middle textile mill privilege. This area contained several large mid-late-nineteenth-century tenements as well as the documented location of an earlier "Stone House" built by the early mill occupants. The excavations within and around the Stone House foundation determined that it included at least two additions as well as a stone-line well in a small yard area adjacent to the house. The main structure foundation appears to have been square, measuring about 30-x-30-ft, and constructed exclusively of drylaid stone with some limited mortar pointing. A center chimney base, measuring roughly 7 by 15 ft, was present in the main structure foundation. It was constructed of rough fieldstones and mortar. A low cellar may have been present in the southern half of the house, while the northern half may only have had a small crawl space underneath the main floor. The stone-lined well measured roughly 5 ft in external diameter, and appears to have been surrounded by a small semi-circular stone retaining wall that could have supported a fence to delineate this side yard area from the adjacent mill yard.

The subsurface testing also resulted in the recovery of over 120,000 post-contact cultural materials from overburden/slopewash, fill deposits, A and B soil horizons, and redeposited/disturbed A/B/C soil horizons. Preliminary review of the artifacts suggests a largely second half nineteenth-century date range of manufacture of diagnostic materials, although a distinct late



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Research Abstracts (cont.)

eighteenth-early nineteenth-century ceramic assemblage is also present. Artifact classes include a wide range of ceramics (table and tea wares), glassware, medicine bottles, metal tools, silverware, and personal items including buttons, clothing and shoe grommets and leather, pipe stems and bowls, sewing items, pendants, buckles, children's toys, combs, gun flints, etc. along with structural debris (window glass, nails, door and window hardware, brick, mortar, slate shingles, etc.). Food remains include butchered cow and pig bone, shellfish, fish bones. The recovered archaeological data will be subjected to laboratory processing and analyses over the next year to address site density, complexity, age, and integrity as well as site-specific research themes relating to the construction and use of domestic/tenement space and lifeways of the mill owners/workers who occupied the site in the nineteenth century.

Research note for the Council for Northeastern Archaeology (<http://www.cneha.org/>)

Submitted by David Gutbrod

The Town of Upton, Massachusetts has just completed purchasing the property and stone chamber referred to as the "Upton Chamber" and is preparing to open it as a public park on April 15. Due to safety concerns, the entrance stonework stabilization initiated an archaeological survey and relevant test pit strategy. In addition to this, a remote sensing project was also conducted focusing on Ground Penetrating Radar, Magnetometry, and satellite imagery. The completion of this work, as well as the previous decades of both professional and hobbyists, created a trail of data and maps that forces researchers into software conflicts, map scale differences and sharing limitations.

One window into solving this potential confusion and even misinterpretation of data is the spatial comparison and geographically positioned information into one system. The obvious answer to this is a GIS system. ArcMap software by ESRI and Quantum GIS are two examples, both of which have a bit of a learning curve that can deter information seeking researchers. WorldMap is a open source free-ware GIS based mapping software that Harvard University has recently released (www.worldmap.harvard.edu). For the Upton project, most interested parties were not able to view the geophysical data since RADAN, SURFER, ArcMAP, and other software tradenames are cost prohibitive, and not where many first time users are able to jump in quickly and use. This led to the creation of the Upton Chamber Archaeology Map currently on the WorldMap site. There are several layers of GPR data, Magnetometry data, satellite images and blueprint maps to give an example of the ease of sharing visual information and to show the potential of future added features. This can be applied to a wide-variety of sites and Heritage Management projects. Sign in using ID Upton and password Upton and type in Upton in the top search area or scroll down to Upton Chamber Map. (Read and click off welcome box). The layers can be switched on and off for visual comparison. Also transparency is achieved by right clicking and sliding the bar to the desired opacity.



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Research Abstracts (cont.)

Historic Sites in Otis, Massachusetts

Submitted by Christopher Donta, UMass Archaeological Services

Archaeological intensive testing along a utility corridor identified a series of three historic period sites in the town of Otis, along the north side of Lee-Westfield Road. One of the sites, consisting of a dry-laid fieldstone cellar hole, corresponds to a house site shown on the 1876 Beers map of Otis as the S&M Hugins site. Artifacts found in test pits near the cellar hole include stoneware, plain whiteware, blue transfer-printed whiteware, blue tinted glass, melted glass, square nails, and metal fragments. The second site appears to be an early 20th century railroad depot associated with the short-lived Huckleberry Trolley running from Lee to Westfield. The Depot site consists of concrete, iron and wood foundation remnants, with a nearby large dump of mortared brick building fragments, more wood fragments, and metal and domestic debris. The third site is a dry-laid fieldstone cellar hole, not in a location marked on any of the known historic maps. Nearby test pits contained whiteware, bottle glass, and window glass. This site may post-date the mid-nineteenth century historic maps. All three sites together document settlement, domestic life and transportation in the Berkshires during the 19th and early 20th century.

Teaberry Native American Site, Blandford, Massachusetts

Submitted by Christopher Donta, UMass Archaeological Services

Archaeological intensive testing along a utility corridor identified the first recorded Native American site in the town of Blandford, Massachusetts. The site consists of quartz chipping debris and a fire hearth, situated on a terrace overlooking a small wetlands to its south. The site is located within the Little River drainage, now dammed to create the Cobble Mountain Reservoir. The site was avoided by the electrical structure repairs, and remains as a valuable example of an upland camp site in the southern Berkshires.

Vining Hill Road Historic Site, Southwick, Massachusetts

Submitted by Christopher Donta, UMass Archaeological Services

Archaeological intensive testing along a utility corridor identified a historic period house site in the northwestern corner of the town of Southwick. The site includes a cellar hole, well, outbuilding depression, stone pile, possible privy, and an associated artifact scatter. The house foundation is a half cellar with central chimney, and what may be an interior well. The most common ceramics at the site are creamware (ca. 1762-1820), pearlware (ca. 1780-1840), with creamware present in larger quantities than pearlware. No whiteware (1830+) is present. A few sherds of Jackfield type ware (1740-1790) were also found. The types present lead to a likely date range for the site of ca. 1770-1800. No structures were found on historic maps that correspond to this location. Impacts to the area consist of electrical pole replacements, which were engineered away from the main portion of the site.



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Coombs' Wharf, Newburyport, Massachusetts

Submitted by Christopher Donta, UMass Archaeological Services

Prompted by the find of intact wharfage dating from the late 18th or early 19th century, an assessment of archaeological features was completed at the site of improvements to the City of Newburyport wastewater treatment facility. Background research documented construction stages of Coombs' Wharf, and details about the life of one of Newburyport's most interesting historical personages of the Revolutionary era. Historic research and map comparisons documented a number of areas of concern related to specific construction plans and impacts. The construction phase archaeological monitoring resulted in the documentation of several structural features associated with Coombs' Wharf and associated structures. Initially the monitoring documented two sections of an intact masonry wharf bulkhead wall from the second half of the 19th century Coombs' Wharf that had been previously impacted during recent construction activities. Monitoring further documented evidence for the locations of timber cribbing, and a timber bulkhead wall that were associated with the 19th century wharf structure. Sections of foundation walls and a concrete pad of a later nineteenth century sawing and planing mill building were documented during utility line excavations. Nearer to Water Street, the excavations for utilities recorded cellar hole fill deposits indicating an 18th and early 19th century structure which may have been the dwelling of Philip Coombs' referred to in the inventory upon his death in 1757. Monitoring in this area consequently recorded foundations of a later 19th century structure built over the remains of the earlier structure and identified as the I. Poor store on the 1872 and later maps.

Agawam to West Springfield Circuit Separation Project

Submitted by Kathryn (Kit) Curran, UMass Archaeological Services

UMass Archaeological Services (UMAS) completed a site examination report for four Native American sites identified during electrical line upgrades between Agawam and West Springfield, MA. The Walnut Street Native American site (19-HD-332) is a cluster of three site loci, located among small streams on a terrace that overlooks the Westfield River in Agawam, MA. Eighteen Native American artifacts were recovered from 12 square meters (0.003 Acres) tested; the majority of the artifacts came from the plow zone. The only diagnostic artifact, a piece of steatite, dates from the Late Transitional Archaic (ca. 3,500-2,500 B.P.).

A much larger Native American site was identified in the active floodplain of the Westfield River. The Heron (19-HD-330), Agawam Meadow (19-HD-269) and Westfield River (19-HD-331) Native American sites are located within a 970 m (3,182 ft) segment of the electrical ROW that traverses Agawam Meadows in Agawam, MA. The three sites are contiguous from west to east. The Agawam Meadow site (19-HD-269) was initially identified during earlier Phase 1B and Phase 2 testing in 2000 and 2001 respectively. During the current Phase 2 survey, some 3,841 artifacts were collected from the three sites: 3,641 of Native American manufacture and 200 from the historic period. Artifacts were recovered from 73.75 square meters (0.018 acre) of tested area.



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In general, artifacts were recovered deeper from west to east and were associated with Native American cultural features. Dates from radiocarbon samples reinforce that the age of cultural deposits increases with depth. To the west at the Heron site (19-HD-330) soil from Feature 343 (32-60 cmbs) produced a conventional radiocarbon date of 680 + 40 BP. At the Agawam Meadow site (19-HD-269), in the center of the project area, Feature 344 returned a date of 600 + 40 BP (40-54 cmbs), while Feature 331 produced a date of 940 + 50 BP (67-74 cmbs). To the east, the buried A-horizon (Feature 314) at the Westfield River site (19-HD-331) produced a date of 1,230 + 40 BP (88-93 cmbs). Radiocarbon data dates suggest that Native Americans occupied the site successively throughout the Late Woodland period (1,000-350 B.P.).

Temporally diagnostic lithics were sparse. A Levanna point (1,300-350 B.P.) was recovered from the Agawam Meadow site (19-HD-269). Steatite (3,500–2,500 B.P.) was collected from multiple sites. Three distinct pottery vessels were identified at the Heron site (19-HD-330). Two of the vessels share attributes with the Windsor Tradition and date from the late Middle Woodland (2,000-1,000 B.P.) to Late Woodland (1,000-350 B.P.) period. The third vessel had Windsor traits, but could not be conclusively typed. The artifact assemblage from the three sites in Agawam Meadows points to a Late Transitional Archaic to Late Woodland occupation, between 3,500-350 B.P. Some 29 cultural features were identified including hearths, storage pits, food processing areas, buried A-horizons, and post molds. Nutshell and maize were identified during floral analysis of feature soils, suggesting that cultivation may have occurred here and that Agawam Meadows was likely occupied in late summer or fall.

Greater Springfield Reliability Project - Fairmont

Submitted by Kathryn (Kit) Curran, UMass Archaeological Services

UMass Archaeological Services (UMAS) conducted a Phase 3 Data Recovery project at the Fairmont Switching Station in Chicopee, MA in September 2011. The site is located on a terrace composed of remnant Gilbert-style delta deposits (the Chicopee delta) that overlooks the Connecticut River. Prior Phase 1B and Phase 2 testing identified eight site loci dating from the Middle Archaic (8,000-6,000 BP) through the Late Woodland (3,000-350 BP) periods.

As part of a Phase 3 data recovery and site protection plan, three excavation blocks were opened in the East & West Locus, surrounding known activity areas including: a Middle to Late Woodland hearth (Feature 202) that returned a radiocarbon date of 1170 + 40 BP, a Middle Archaic lithic concentration, and a Woodland period lithic and Native American pottery concentration. In total, 60 square meters (.015 Acres) were excavated. Approximately 500 Native American artifacts were collected during the Phase 3 including: a Stark projectile point (7,500-6,500 BP), three bifaces (two with Stark attributes), lithic debitage, and Woodland (3,000-350 BP) period pottery.

The topsoil was stripped from an additional 1,425 square meters (0.35 Acres) at Fairmont to identify and record cultural features associated to the East & West Locus. Some seven Native American features were identified, most in the area of the Middle Archaic activity area. Artifacts recovered from the hand-stripped portion of the site include more than 150 artifacts: a possible hammerstone, primary flakes, a portion of a grooved axe, a proximal projectile point fragment



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(untyped), three scrapers (two thumbnail), two quartz cores, and a blade tool. Lithic raw material types of siltstone/mudstone, quartz, and quartzite were reported, as was a single chert flake. More information will be forthcoming as artifacts are analyzed, radiocarbon assays are completed, and flotation samples are examined.

Greater Springfield Reliability Project – AG-18

Submitted by Kathryn (Kit) Curran, UMass Archaeological Services

In the Spring of 2011 UMass Archaeological Services (UMAS) completed additional Phase 2 site examination as part of a site avoidance and protection plan at the AG-18 (Mittineague Falls) Native American site (19-HD-319) in Agawam, MA. The site is located on a glacial outwash plain situated on a bluff overlooking the Westfield River. A deep ravine bisects the site from southwest to northeast. Approximately 700 Native American artifacts were collected during the Phase 1B, with several thousand more artifacts and 21 cultural features recorded during the initial Phase 2 site examination. Diagnostic artifacts collected suggest that the site was occupied between the Late Archaic (6,000-3,000 BP) through the Late Woodland (1,000-350 BP) periods.

As part of a site avoidance and protection plan, an additional Phase 2 site examination was conducted at AG-18. The testing was concentrated in areas of high artifact concentration and feature density, which could not be avoided during electrical line maintenance and upgrade. In total, 497 square meters of additional testing (0.12 acres) was completed in Spring 2011 within the electrical corridor ROW and along an adjacent off-ROW access road. During the Phase 2 additional some 11,570 Native American artifacts were collected including: hundreds of steatite vessel fragments (3,500-2,500 BP), a score of pottery (3,000-350 BP), 18 projectile points, three drills, eight scrapers, 39 bifaces, 11 cores, thousands of flakes, dozens of fire cracked rock fragments, and seven hammerstones. Twenty-two cultural features were also identified: food storage pits, hearths, burn episodes, and postmolds. Many diagnostic projectile points were recovered during Phase 1B, Phase 2, and Phase 2 additional testing. The collection includes Late Archaic (6,000-3,000 BP) variants (Susquehanna Broad, Orient Fishtail, Lamoka, Atlantic, Brewerton Corner-Notched, Brewerton Side-Notched, Perkiomen, Small Stemmed, Vosburg, and Wayland Notched), Early Woodland (3,000-2,000 BP) types (Meadowood and an Adena-like), and Late Woodland (1,000-350 BP) styles (Levanna). Artifacts, radiocarbon, and soil samples are currently being analyzed at UMAS. A complete interpretation of site function, activity areas, temporal relationships, and site integrity is in progress.





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The Earliest
Americans:
The Northeast.
by Dena Dincauze

The Earliest Americans—The Northeast

2000 Common Ground; NPS; pp. 34-44

http://www.nps.gov/archeology/cg/spr_sum_2000/dincauze.htm

The Northeast covered 360,000 square miles, from the Atlantic coastal plain, west across the broad Piedmont valleys, to the folded and crumpled Appalachian Mountains and the eastern Allegheny Plateau. During Pleistocene times, except for the southerly reaches of what is now Delaware and lower Pennsylvania, even the highest peaks were periodically covered by massive glaciers up to a mile thick. Ice, wind, and water scoured bedrock, moved sediment, and left a veneer of sand and gravel everywhere in the region. Glacial lakes formed and drained as the ice melted, and the sea level rose as the water flowed in. Forests and grasslands succeeded the tundra on ice-free land, and deer, bear, and other modern animals lived with caribou, mastodons, and other animals that are now extinct or that have since moved farther north.

Paleoindian exploration of the region was comparable to a moon walk, or settling islands in the Pacific—relying entirely on one's own ingenuity. The first people showed themselves equal to the challenge, creating mental maps and gazetteers for naming and organizing knowledge about landforms, sources of useful stone and other raw materials, vegetation, and animals, many of which they had never before encountered. Exploring unknown terrain, the first Paleoindian settlers had to adapt quickly to strange environments and to different and often rapidly changing climatic conditions.

How did people first reach the Northeast? Traditional Native Americans believe they were created there. Most scientists think they first came from places farther south or west at the end of the most recent Ice Age, known as the Wisconsin Glaciation, sometime between 12,000 and 15,000 years ago (see sidebar on dating the era, page 25). Scholars debate the routes traveled by these pioneers, having minimal direct evidence. Formidable obstacles had to be overcome along whatever route they chose. Deep iceberg-strewn lakes filled the eastern Great Lake basins where the edge of the melting glacier stood. Farther east, an arm of the Atlantic Ocean called the Champlain Sea covered today's Lake Champlain and the adjacent St. Lawrence lowland. Rivers swollen with torrents of glacial meltwater—clogged with silts, sands, and gravels—presented daunting barriers. Expanses of swamp and wetlands bordered the glacial lakes, seas, and rivers; these too impeded free passage. Migratory waterfowl and other animals were the guides across and around the steep Appalachian ridges and broad Piedmont valleys, as well as over a coastal plain whose broad sandy flatlands covered what is now the Gulf of Maine and the Nantucket and Long Island Sounds to as far as 100 miles east of the present-day shoreline.

The timing of these arrivals remains uncertain. The earliest radiocarbon readings for human occupation in the Northeast, dating to as long as 17,000 years ago, are from the Meadowcroft site in southwestern Pennsylvania, the only systematically excavated rockshelter in the region where intact Paleoindian deposits have been reported. These dates, not yet replicated elsewhere in the Northeast, remain controversial. Elsewhere in the region, sites dating around 10,800 years ago—containing chipped stone blades, scrapers, knives, and Clovis-style fluted projectile points similar to those found farther south and west—represent the earliest widely documented human occupations in the Northeast. Charcoal from northeastern sites has enabled archeologists to create the nation's largest and most complete suite of radiocarbon dates for fluted points.



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The initial peopling of the Northeast has long been a source of scientific speculation. More than a century ago, New Jersey resident Charles Conrad Abbott mistakenly asserted that crude-looking tools found in gravels near Trenton were as old as Lower Paleolithic tools in Europe (older than 100,000 years). Modern scientific research began in the 1950s with investigations at Pennsylvania's Shoop site and the Bull Brook site in Massachusetts. Both were multi-acre locales larger than Paleoindian sites elsewhere in the country. Each contained hundreds of whole or fragmentary fluted projectile points resembling the Clovis points found farther west.

Assays from western sites, using the newly developed radiocarbon dating technique, revealed that the Clovis sites contained the oldest evidence of human habitation on the continent. Unfortunately, investigators projected the interpretation of these people as big game steppe hunters into the Northeast's forested, mountainous terrain.

This and many other ideas about Paleoindian life have been challenged by an avalanche of recent findings, funded in large part by programs mandated by the National Historic Preservation Act. None of the sites discovered has yet to yield evidence of the dramatic herd-kills that point to big game hunting. It is true that all but the most deeply buried Paleoindian sites have been damaged by plowing, development, vandalism, or collectors seeking the exquisite ancient artifacts that command high prices on the international antiquities market. That said, analysis of the Northeast's sites and artifacts has shed new light on how the early Americans adapted to challenging and rapidly changing environments.

Fluted projectile points are the most numerous, most widespread, and most telling artifacts associated with Paleoindian occupation in the Northeast. Most are crafted from high quality cherts and other rocks particularly suited for stone tool manufacture. Usually they are found near rivers, lakes, and wetlands, which were frequented by the earliest Americans. Others are associated with exposed bedrock outcrops where Paleoindians quarried and worked stone into fluted points and other implements.

New Insights

Burned animal bone recovered at Bull Brook and several other sites affirm that Paleoindians were a major new predator on the scene. However, the absence of convincing evidence implies that people were not the primary cause of the extinctions already well underway in the region. Discoveries of charred nutshells and fish bones at Pennsylvania's Shawnee-Minisink site suggest more generalized subsistence patterns focused on fishing, hunting, trapping, collecting, and harvesting.

The largest sites were almost certainly residential. Archeologists have variously interpreted them as places for seasonal hunts, group gatherings, and staging areas for colonizing forays into unfamiliar territory. Evidence at the smaller sites, usually called camps, is less diverse than at the large ones, indicating shorter, more focused, residence.

Research in bedrock quarries has increased lately. Analyses of the cherts and other stones used for tool manufacture indicate that Paleoindians quickly located the best and most readily avail-



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able quarries, both bedrock and gravel spreads. Some of the largest are the Munsungan Lakes group in Maine, and the West Athens Hill, Flint Mine Hill, and Divers Lake sites in New York. Archeologists in the region adapt the Great Lakes projectile point style sequence, developed for Michigan, to link Paleoindian sites with time periods and environmental conditions. Overall, the point styles are not cleanly discrete in time—there are intermediates between all of them, and more than one may appear in a given site. These two observations support the inference that Paleoindian use of the region was essentially continuous following the initial colonization. The earliest securely dated fluted projectile points found widely in the Northeast date between 10,800 to 10,500 years ago. These are straight-sided, concave-base fluted points ground dull around their bases, comparable to Clovis points found farther west. Various styles known in the region as Gainey and Bull Brook-style artifacts (named after the sites where they were first scientifically described) these are found widely in the Northeast. Deeply concave-based Debert/Vail types largely occur in more northerly sites, while distributions of distinctive Shoop-style points concentrate in the south-central reaches of the region (the Middle Atlantic states). Several varieties of fluted point styles with recurved margins appear in sites dating from 10,500 to 10,100 years ago. Found throughout the region, these Barnes-Parkhill-Neponset points are the most numerous and widespread fluted points in the Northeast. A stylistically similar type, the Cumberland point, occurs mainly in the southerly and westerly parts of the Northeast.

The final fluted point style, known as Crowfield and mainly found in the northwestern portions of the region, dates around 10,100 years ago. Holcombe, Turkey Swamp, and other unfluted lance-like or triangular points occur in sites dating from 10,100 to 9,000 years ago, the Early Holocene period. They overlap in time with large lance-shaped points that were typical of the St. Lawrence Valley until about 8,000 years ago.

Ancient Economies

Projectile points represent only a small part of the evidence of how Paleoindians satisfied basic needs for food, raw materials, shelter, and finished goods. The notion that Paleoindians used their projectiles primarily to hunt big game is fading—caribou, for example, were present but not in huge herds, nor were they larger than the native deer, moose, and elk. A new consensus has emerged that in a rapidly changing and diverse environment, one eats what is available. Small animals including birds, rabbits, fish and seals as well as edible plants were no doubt essential to survival.

Scientific analysis has shown that the bedrock sources are often far from places where points are discovered. Some archeologists speculate that such distribution patterns indicate the existence of long-range trade routes. Others, however, argue that trade was far too uncertain a mode of distribution for people spread so thinly on the land. Instead, scholars increasingly view the evidence as indicating residential mobility, marriage ties, symbolic exchange networks, and regularly scheduled seasonal moves.

Studies of stone tool wear patterns and hafting elements illustrate the versatility of Paleoindian toolkits, with their range of tools and other artifacts created from diverse materials. The earliest Americans relied upon lightweight and multipurpose implements crafted from the best available materials. Bifaces served as projectiles, knives, and flake cores. Unifacial scrapers removed flesh,



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hair, and fat from skins, shredded bark and wood to line cradles and make cordage, and shaped bone, ivory, horn, and wooden hafts and handles. Gravers scored bone and horn, and pierced skins; knives cut and shaped soft materials-meat and skins. Many of these tools doubtless were used by women. Further archeological analysis can offer clues to gender roles in the region's first economies.

Picturing Culture

Today, researchers in the region are using the archeological record to test models of Paleoindian population size, density, composition, mobility, and identity. One of the assumptions guiding interpretations-that uniformities in artifact style and material-use may be indicators of social identity-may not apply to thin, mobile populations such as those of late glacial North America. We should be prepared for surprises here. Even if the assumption is correct, the meaning may vary depending on the density of settlement, the environment, and a host of other variables. How populous were these groups? Estimates depend on the vagaries of radiocarbon dating. Long spans of time can become compressed within relatively narrow bands of radiocarbon dates, suggesting larger, denser populations than actually existed. The substantial number of small sites (many containing remains of more than one occupation) suggests small mobile societies of less than 50 people exploiting territories ranging from several hundred to many thousands of square miles. Changes in settlement patterns and artifact styles through time suggest shrinking territories and mobility, abandonment of certain regions, and rising social complexity after the short period of return to cold called the Younger Dryas.

Central Pennsylvania may have been a political and demographic watershed between the Northeast and the Southeast. Although there is debate, archeologists note that the occupants of the Shoop site may have collected chert from the gravel outwash of the nearby Susquehanna River, not from bedrock near Lake Ontario, another supposition. Since the point styles resemble those of farther south, Shoop may lie near the limit of populations moving from that direction. Farther north, the Gainey-Bull Brook and Debert-Vail styles apparently arrived from the west.

Of more ephemeral things like cultural values and beliefs, we have little in hand. No clearly identifiable Paleoindian rock art has been found in the Northeast. The meaning of the donut-shaped stone beads found at New York's Hiscock site and the DEDIC site in Massachusetts remains uncertain. Small fluted projectiles discovered at numerous sites in the region may be shamanic paraphernalia, toys, or simply small points.

A New Dawn for the First Americans?

With the volume of information gathered over the last decade and a half-a harvest of efforts to preserve sites endangered by public projects like highway construction-researchers are looking beyond traditional site surveys and excavations to advance the state of knowledge. Recent studies of the extraordinary number of artifacts unearthed in accordance with preservation laws hint at the enormous research potential.

Although the Paleoindian point-style chronology in the Northeast needs refinement, it is the best-dated and most complete in North America. Site-distribution studies, such as intensive statewide



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inventories, can bring more properties under the wing of public protection. Improved ability to recognize raw materials and where they came from will permit a more accurate picture of how they were used and transported. With the right equipment, artifact research will inform about individual sites, perhaps even about how and where men and women went about their respective tasks. Detailed mapping of settlement floors through excavation will give us a better idea of how many people were there, and for how long. Better paleoenvironmental data will improve our understanding of how the earliest Americans adapted to changing times. GIS mapping programs at both the regional and continental levels will support studies of human geography in these remote times.

This exploratory regional review should help to open discourse about northeastern Paleoindians and stimulate consideration of alternative interpretations of new evidence.

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Select References

There is no summary of northeastern Paleoindian sites that reflects current understanding. The sources here are chosen for clarity, accessibility, and representativeness. Readers seeking further information on the Northeast may consult the references listed in each source, keeping in mind that the subject is rapidly developing.

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279-292. Prepared in 1989 to introduce Soviet Paleolithic scholars to Paleoindians in the eastern United States. The emphasis is on differences from western kill sites with megafauna, and on the more abundant cultural data in eastern habitation sites. Among the first of a recent spate of survey articles on eastern sites.

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