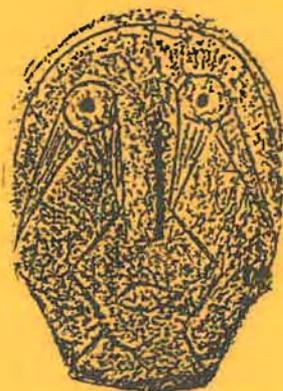


**MIDWEST ARCHAEOLOGICAL CONFERENCE  
35th ANNUAL MEETING**

**PROGRAM AND ABSTRACTS**



*October 5-6, 1990*

**Northwestern University  
Evanston, Illinois**

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MAC  
1990

the 1990s, the number of people in the UK who are aged 65 and over has increased from 10.5 million to 13.5 million (19.5% of the population).

There is a growing awareness of the need to address the needs of older people, and the Government has set out a strategy for the 21st century in the White Paper on *Ageing Better: The Government's Strategy for Older People* (Department of Health 1999).

The White Paper sets out a vision of older people who are able to live independently, and to participate fully in the life of their communities. It also sets out a number of key objectives, including: to improve the health and well-being of older people; to ensure that older people are able to live independently; to ensure that older people are able to participate fully in the life of their communities; and to ensure that older people are able to live in their own homes.

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ARCHIVES  
Office of the State Archaeologist  
The University of Iowa  
Iowa City, IA 52242



**35th MIDWEST ARCHAEOLOGICAL CONFERENCE  
NORTHWESTERN UNIVERSITY**

**October 5-6, 1990**

**Friday Morning -- OCTOBER 5, 1990**

**[ 1 ] General Session: HISTORIC PERIOD RESEARCH**

Norris, McCormick Auditorium

Chairperson: **Rochelle Lurie**

- 10:00 **Steven Hackenberger**; MACKTOWN ARCHAEOLOGICAL INVESTIGATIONS, WINNEBAGO COUNTY, ILLINOIS
- 10:20 **Mark E. Esarey**; 1989 EXCAVATIONS AT FT. GRATIOT, PORT HURON, MICHIGAN
- 10:40 **Floyd Mansberger and Joseph Phillippe**; THE EARLY 1870S FARMER'S MARKET: CERAMIC AVAILABILITY AND ECONOMIC SCALING AT THE FARMERS HOME HOTEL, GALENA, ILLINOIS
- 11:00 *Break*
- 11:20 **Marilyn R. Orr and Myra J. Glesen**; STATURE VARIATION AMONG AMERICAN CIVIL WAR SOLDIERS
- 11:40 **Mark Madsen and Kevin Christensen**; A GREAT LAKES FORE-AFT RIGGED SCHOONER FROM THE MID-19TH CENTURY

**[ 2 ] General Session: NEW IDEAS ON OLD PROBLEMS**

Norris, 2C

- 10:20 **J. Peter Denny**; THE ALGONQUIAN MIGRATION FROM THE COLUMBIA PLATEAU TO THE MIDWEST, CIRCA 1800 B.C.: CORRELATING LINGUISTICS AND ARCHAEOLOGY
- 10:40 **James A. Marshall**; THE PREHISTORIC PARALLEL STRAIGHT WALLS OF EASTERN NORTH AMERICA EXAMINED FOR ASTRONOMICAL ORIENTATIONS
- 11:00 **Harry Murphy**; BUREAUCRACY, THE AGENCY ARCHAEOLOGIST, AND THE ETHICAL DILEMMA
- 11:20 **Annette G. Erickson and C. George Hinkle**; MOVING FLOTATION INDOORS
- 11:40 **Charles Stout**; G-K DIRECTIONAL VARIANCE ESTIMATION METHOD FOR SURFACE COLLECTION COUNT DATA

Display Room: Norris 2D

Friday Afternoon – OCTOBER 5, 1990

[ 3 ] Plenary Session: ARCHAIC HUNTER-GATHERERS

Norris, McCormick Auditorium

Organizer: James Brown

- 1:30 James Brown; INTRODUCTION TO THE SESSION  
1:50 Douglas Bamforth; IMPLICATIONS OF THE ALLEN SITE FOR THE PALEOINDIAN/ARCHAIC TRANSITION IN THE CENTRAL PLAINS  
2:10 John Bower; EARLY TO MID HOLOCENE CULTURES AND ENVIRONMENTS OF CENTRAL IOWA  
2:30 Robert E. Warren; PEOPLE AS PALEOENVIRONMENTAL INDICATORS; HOLOCENE SETTLEMENT PATTERNS AND ENVIRONMENTAL CHANGE IN THE EASTERN PRAIRIE PENINSULA  
2:50 Kristin Hedman and Michael Melnkoth; A PRELIMINARY REPORT ON THE MIDDLE ARCHAIC MORTUARY AND HABITATION AREA AT THE TREE ROW (11F53) SITE, FULTON COUNTY, ILLINOIS  
3:10 OPEN DISCUSSION

[ 4 ] Poster Papers and Displays

1:30-6:00 Norris, 2D

RECEPTION 1

6:00-8:30 Cash bar, 2nd floor, OMNI-ORRINGTON HOTEL

Saturday Morning – OCTOBER 6, 1990

[ 5 ] Symposium: U OF THE LAKE III: ARCHAEOLOGICAL RESEARCH IN THE LAKE MICHIGAN REGION 1

Norris, 2E/F

Organizers: Robert J. Jeske and Rochelle Lurie

- 9:00 Mark Lynott; INDIANA DUNES NATIONAL PARK  
9:20 Rochelle Lurie and Elizabeth Goldsmith; A REVIEW OF FERMILAB ARCHAEOLOGY 1970-1990: A STUDY IN UPLAND SETTLEMENT PATTERNS  
9:40 Jeffrey Shaffer; HISTORY AND ARCHAEOLOGY OF TWO 19TH CENTURY FARMSTEADS IN WILL COUNTY, ILLINOIS  
10:00 Break  
10:20 Robert J. Jeske; THE YOUNG JIM SITE: A STARVED ROCK COLLARED OCCUPATION IN THE UPPER ILLINOIS RIVER VALLEY  
10:40 Mary Beth Trubitt; LATE WOODLAND OCCUPATION IN COOK COUNTY  
11:00 M. Catherine Bird; NEW DATA CONCERNING LANGFORD CERAMICS

11:20 Douglas Kullen; TEACHING TEACHERS ABOUT ARCHAEOLOGY: THE 1989 SUMMER FIELD SCHOOL IN NAPERVILLE, ILLINOIS

[ 6 ] General Session: MISSISSIPPIAN PERIOD RESEARCH

Norris, Louis South

Chairperson: Elizabeth Benchley

9:00 George R. Milner and Eve Anderson; LATE PREHISTORIC WARFARE IN WEST-CENTRAL ILLINOIS

9:20 George R. Milner and Sissel Schroeder; CAHOKIA AREA SURVEY PROJECT: RESEARCH OBJECTIVES AND COLLECTIONS

9:40 John E. Kelly; THE PULCHER TRADITION AND ITS ROLE IN THE DEVELOPMENT OF MISSISSIPPIAN IN THE AMERICAN BOTTOM

10:00 Timothy R. Pauketat; MAKING THE MASSES MISSISSIPPIAN: THE RESTRUCTURING OF TRACT 15A COMMUNITY AT CAHOKIA, A.D. 1000±50

10:20 Break

10:40 Robert J. Salzer; RED HORN AND THE WILLIAMS-GOGGIN HYPOTHESIS

11:00 Mark R. Schurr and Sherri L. Hilgeman; FLUORIDE DATING AND POTTERY CHRONOLOGY AT ANGEL

11:20 Thomas E. Emerson, Ray Perkins and Richard FischeI; THE MCFARLAND SITE: PRELIMINARY RESEARCH ON THE LATE MISSISSIPPIAN OCCUPATION OF THE MISSISSIPPI RIVER SNY BOTTOM LOCALITY IN ILLINOIS

11:40 Kit W. Wesler; MISSISSIPPIAN CERAMIC CHRONOLOGY IN THE OHIO-MISSISSIPPI CONFLUENCE REGION: A WICKLIFFE PERSPECTIVE

[ 7 ] General Session: LATE WOODLAND PERIOD RESEARCH

Norris 2C

Chairperson: James M. Collins

9:00 James M. Collins; NEW INFORMATION ON WOODLAND STAGE ADAPTATIONS OF INTERIOR NORTHEAST IOWA

9:20 Caven P. Clark; TRACE ELEMENT ANALYSIS OF LATE PREHISTORIC CERAMICS IN THE LAKE SUPERIOR BASIN

9:40 Claire McHale Milner and John M. O'Shea; LIFE AFTER THE JUNTUNEN SITE?: LATE PREHISTORIC OCCUPATION OF THE UPPER GREAT LAKES

10:00 Michael J. Hambacher; BETWIXT AND BETWEEN THE NORTH AND SOUTH: A LATE WOODLAND CERAMIC SEQUENCE FROM THE GRAND TRAVERSE BAY REGION OF MICHIGAN

10:20 Break

10:40 Richard W. Yerkes and Albert M. Pecora III; THE INTRODUCTION OF THE BOW AND ARROW IN THE OHIO VALLEY: A METRIC AND USE-WEAR ANALYSIS OF JACK'S REEF AND TRIANGULAR POINTS FROM THE LATE WOODLAND PARKLINE SITE (46PU99), PUTNAM COUNTY, WEST VIRGINIA

- 11:00 **Robert G. McCullough**; A REANALYSIS OF CERAMICS FROM THE BOWEN SITE:  
IMPLICATIONS FOR DEFINING THE OLIVER PHASE OF CENTRAL INDIANA
- 11:20 **Flora Church**; BRADY RUN: A MULTI-COMPONENT ROCKSHELTER IN SOUTHERN OHIO

**[ 8 ] General Session: LANDSCAPES AND ARCHAEOLOGY**

Norris, 2A

Chairperson: **John Hudson**

- 9:00 **William Green, E. Arthur Bettis III, Blane Nansel, and Mary K. Whelan**;  
INTERDISCIPLINARY INVESTIGATION OF ALLUVIAL FANS IN SOUTHEASTERN IOWA
- 9:20 **Joe Alan Artz and Julieanne VanNest**; ARCHAEOLOGY AND GEOMORPHOLOGY IN THE  
UPPER MISSISSIPPI VALLEY NEAR FORT MADISON, SOUTHEAST IOWA
- 9:40 **Cheryl Ann Munson and Patrick J. Munson**; ARCHAEOLOGICAL DATING OF  
PREHISTORIC EARTHQUAKE FEATURES IN THE LOWER WABASH VALLEY
- 10:00 **Victoria Dirst**; RESPONSE TO LAKE LEVEL FLUCTUATIONS IN NORTHEASTERN  
WISCONSIN
- 10:20 *Break*
- 10:40 **K. Kris Hirst**; SPATIAL ASPECTS OF UPLAND LIVING: CHOICES WITHIN THE PRAIRIE  
PENINSULA
- 11:00 **Richard R. Wahls**; PREHISTORIC UTILIZATION OF THE MISSISSIPPI RIVER  
FLOODPLAIN IN THE PRAIRIE DU CHIEN LOCALITY, SOUTHWESTERN WISCONSIN
- 11:20 **James R. Jones III, Gary D. Ellis, Donna K. Oliva, Lisa A. Maust, and Amy  
Johnson**; A CRM DATABASE MODEL OF LATE ARCHAIC OCCUPATIONS IN SOUTHWESTERN  
INDIANA

**[ 9 ] Poster Papers and Book Displays**

9:00-5:00 Norris, 2D

**Saturday Afternoon – OCTOBER 6, 1990**

**[ 10 ] General Session: MIDDLE WOODLAND PERIOD RESEARCH**

Norris, Louis South

Chairperson: **Michael Wiant**

- 1:30 **N'omi Greber and William Pickard**; PRELIMINARY RESULTS OF EXCAVATIONS IN  
CAPITOLIUM MOUND, MARIETTA EARTHWORK, WASHINGTON COUNTY, OHIO
- 1:50 **Bret J. Ruby, Stephen Ball, and Mark R. Schurr**; INVESTIGATIONS OF THE  
GRABERT SITE: A MANN PHASE MIDDLE WOODLAND SITE IN SOUTHWESTERN INDIANA
- 2:10 **Duane Esarey and James Doolittle**; GROUND-PENETRATING RADAR SURVEY OF THE  
ROCKWELL MOUND, HAVANA, ILLINOIS

- 2:30 **Michael D. Wiant, Charles R. McGimsey, and Kenneth B. Farnsworth;** SIMILARITIES AND DIFFERENCES: REEXAMINING THE MIDDLE WOODLAND OCCUPATIONS AT NAPOLEON HOLLOW
- 2:50 *Break*
- 3:10 **Katharine C. Ruhl;** OHIO HOPEWELL EARSPOOLS: FORM AND FUNCTION
- 3:20 **William S. Dancey;** THE BLADELET INDUSTRY AT THE MURPHY SITE, A MIDDLE WOODLAND SETTLEMENT IN CENTRAL OHIO
- 3:30 **Thomas Wolforth;** THE MIDDLE WOODLAND STEUBEN MICROSTYLE CONCEPT: AN UPDATE
- 3:50 **Duane Esarey;** COURTING THE BLACK SAND/MORTON MUSE: CERAMIC TYPOLOGY AND EARLY TO MIDDLE WOODLAND CONTINUITY IN THE CENTRAL ILLINOIS RIVER VALLEY

**[ 11 ] General Session: RIDGED FIELDS AND ONEOTA ARCHAEOLOGY**

Norris, 2A

Chairperson: **Robert F. Sasso**

- 1:30 **Robert F. Sasso;** WISCONSIN AGRICULTURAL LOCI: AN AGENDA FOR FUTURE RESEARCH
- 1:50 **William Gustav Gartner;** A FIELD REPORT ON THE HULBERT CREEK RIDGED FIELDS, WISCONSIN
- 2:10 **Thomas J. Riley and Chaksana Said;** AN ANALYSIS OF SOILS FROM THE PUTATIVE RIDGED FIELDS AT THE LUNSFORD-PULCHER SITE (11S40), ILLINOIS
- 2:30 **Clark A. Dobbs;** SETTLEMENT PATTERNING AT THE ADAMS SITE (47P12): AN ONEOTA SITE WITHIN THE RED WING LOCALITY
- 2:50 **J. A. O'Gorman, R. E. Hollinger, and J. A. Vradenburg;** IMPRESSIONS FROM THE FIELD: ONEOTA HOUSES AND BURIAL PRACTICES

**[ 12 ] General Session: ARCHAIC PERIOD SITES AND STUDIES**

Norris, 2E/F

Chairperson: **Jacqueline A. Ferguson**

- 1:30 **Jacqueline A. Ferguson;** ARCHAIC STRATEGIES OF CHERT PROCUREMENT AND SETTLEMENT MOBILITY IN NORTH-CENTRAL ILLINOIS
- 1:50 **Steven R. Ahler and Bonnie W. Styles;** LATE ARCHAIC OCCUPATIONS AT MODOC ROCK SHELTER
- 2:10 **James B. Stoltman;** THE PRESTON PHASE, A NEWLY RECOGNIZED EXPRESSION OF THE LATE ARCHAIC STAGE IN SOUTHWESTERN WISCONSIN
- 2:30 **John F. Doershuk, Christopher A. Bergman, and David J. Rue;** RIVERTON CULTURE LITHICS: TECHNOLOGICAL AND SPATIAL ANALYSES OF THE ATTERBURY SITE (12-B-815), BARTHOLOMEW COUNTY, INDIANA
- 2:50 *Break*
- 3:10 **Toby A. Morrow;** TOWARD A REFINED ARCHAIC PROJECTILE POINT SEQUENCE FOR WEST CENTRAL ILLINOIS

3:30 **Kenneth B. Tankersley, Michael D. Wiant, and Francis R. Knight; RECENT INVESTIGATIONS AT THE BOSTROM SITE: AN EARLY PALEOINDIAN WORKSHOP-HABITATION IN SOUTHWESTERN ILLINOIS**

3:50 **Douglas Kullen and Lynn Malinowski; THE PHOTON SITE: AN ARCHAIC SETTLEMENT IN THE FORESTED UPLANDS OF NORTHERN ILLINOIS**

[ 1 3 ] **Symposium: U OF THE LAKE III: ARCHAEOLOGICAL RESEARCH IN THE LAKE MICHIGAN REGION 2**

Norris, 2C

1:30-4:00 Artifact Exhibit

**BUSINESS MEETING** Norris, Louis South

4:15 Brief Meeting

**RECEPTION 2** Norris "The Gathering Place"

8:00-12:00

**MIDWEST ARCHAEOLOGICAL CONFERENCE  
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**ABSTRACTS**

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**Northwestern University  
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Ahler, Steven R., and Bonnie W. Styles (Illinois State Museum)  
LATE ARCHAIC OCCUPATIONS AT MODOC ROCK SHELTER

[12]

Recent excavations at Modoc Rock Shelter (11 Ra<sup>S</sup> 501) provide a sample of materials from Late Archaic strata dating between 5000 and 4000 BP. Five analytical units were defined on the basis of stratigraphic differences. Analyses of lithic, botanical, and faunal remains document changes in settlement function and subsistence within the Late Archaic. The early Late Archaic Falling Springs phase (5000-4700 BP) strata show high diversities of fauna, flora, and lithic tools, suggestive of base camp occupation similar to those recorded for Middle Archaic strata. During the Titterington phase (post-4100 BP), decreases in species and lithic tool diversities suggest a shift toward more limited range of activities. The shift in settlement pattern recognized by Fowler (1959) is substantiated, but occurred later in time than originally proposed.

Artz, Joe Alan, and Julieanne VanNest (Iowa Office of the State Archaeologist; Center for American Archaeology)  
ARCHAEOLOGY AND GEOMORPHOLOGY IN THE UPPER MISSISSIPPI VALLEY NEAR FORT MADISON, SOUTHEAST IOWA

[8]

Forty-three archaeological sites were recorded along 11 km of highway corridor in Lee County, Iowa. The corridor traverses an alluvial fan, a Late Wisconsinan terrace complex, and Holocene fills of two Mississippi River tributaries. Buried archaeological deposits are present in all three geomorphic contexts. Woodland components are buried in windblown sands that mantle the Wisconsinan terraces, and in a sandy colluvial apron at the base of a Wisconsinan terrace. Survey results underscore the need for deep testing in geomorphic contexts that are often considered to lack potential for buried sites. Observations are also offered on Late Woodland manifestations in the study corridor, and the absence of substantial Oneota or Mississippian occupations.

Bamforth, Douglas (Colorado)  
IMPLICATIONS OF THE ALLEN SITE FOR THE PALEOINDIAN/ARCHAIC TRANSITION IN THE CENTRAL PLAINS

[3]

The Allen site is one of three Paleoindian sites in the Medicine Creek drainage of southwest Nebraska which were excavated approximately 40 years ago. Analysis of well-documented existing collections from this site sheds light on the transition between Paleoindian adaptations and Archaic ones. A pattern of faunal exploitation and lithic technology is revealed at Allen that does not resemble that seen in other Plains Paleoindian sites. Contrasts between Allen and these other sites, which are generally associated with communal bison kills, suggests that Allen discloses a very different aspect of Paleoindian adaptations that may represent a seasonal period of population dispersion.

Bird, M. Catherine (Wisconsin-Milwaukee)  
LANGFORD TRADITION REGIONAL SETTLEMENT SYSTEM

[5]

Nearly a century has passed since George Langford first visited the Fisher Site in Will County, Illinois, and 50 years have elapsed since materials were recovered from the other published Langford sites located along the Upper Illinois River. A mass of unliberated data lies scattered across northern Illinois and neighboring states, curated in various governmental and educational institutions. This paper focuses on establishing the geographical extent of the Langford Tradition sites through examination of the IAS files, personal field research, and referenced citations in published reports.

Bowen, Jonathan E. (Fremont OH)  
HOPEWELLIAN MIDDLE WOODLAND COMPONENTS IN THE WESTERN FLINT RIDGE REGION (poster)

[9]

Vanport chert, which outcrops at Flint Ridge in east-central Ohio, was extensively utilized by Hopewellian Middle Woodland (100 BC-AD 400) peoples. The western half of a 1500 km<sup>2</sup> tract centered on Flint Ridge contains approximately 70 reported Hopewellian components,

including the Newark Earthworks (33LI10), reputedly the most extensive system of prehistoric earthworks in North America. Eleven Hopewellian components have been identified within a 2 km radius of Yost Station, in the broad valley of Jonathan Creek 10 km southwest of Flint Ridge. Other areas, although containing abundant prehistoric remains, have yielded few Hopewellian materials.

Bower, John (Iowa State)

[3]

**EARLY TO MID HOLOCENE CULTURES AND ENVIRONMENTS OF CENTRAL IOWA**

Recent work in two small tributaries of the Skunk River, central Iowa, has generated evidence concerning culture history, subsistence-settlement practices and paleoenvironments during early to mid Holocene time. In one tributary, the Buchanan drainage, excavations at a stratified site have yielded projectile points of early and Middle Archaic type, together with faunal assemblages of varying composition and macrobotanical remains. At the Cambridge locality, about 16 km south of the Buchanan drainage, Agate Basin points are associated with a bison-dominated fauna and charred seeds. This paper summarizes the results of investigations at the Buchanan and Cambridge localities to date.

Church, Flora (Archaeological Services Consultants, Inc., Columbus OH)

[7]

**BRADY RUN: A MULTI-COMPONENT ROCKSHELTER IN SOUTHERN OHIO**

Located on the west side of a small hollow in Washington Township, Lawrence County, Ohio, the rockshelter was situated 12.5 km above an unnamed tributary of Brady Run. Three cultural horizons yielded quantities of artifacts, faunal, and archaeobotanical materials. Radiocarbon-dated samples from two of four features, along with diagnostics, indicated Late Archaic, Early Woodland, and transitional Late Prehistoric utilization of the shelter. In all cases, occupations appear to have taken place from late summer to late fall, with the greatest diversity of resources utilized during the Early Woodland period.

Clark, Caven P. (Midwest Archaeological Center, NPS)

[7]

**TRACE ELEMENT ANALYSIS OF LATE PREHISTORIC CERAMICS IN THE LAKE SUPERIOR BASIN**

Ceramic heterogeneity, both on individual sites and for the Upper Great Lakes region as a whole, has been described as chaotic. This report presents the results of the neutron activation analysis of 100 geological and archaeological clay samples from sites within and near the Lake Superior basin. Hypotheses pertaining to the potential interaction of groups manufacturing Blackduck, Juntunen, Huron, Oneota, and Lakes phase style ceramics are addressed. Results identify geographic zones of ceramic production which may correspond to the distribution of Late Woodland archaeological cultures.

Collins, James M. (Iowa Office of the State Archaeologist)

[7]

**NEW INFORMATION ON WOODLAND STAGE ADAPTATIONS OF INTERIOR NORTHEAST IOWA**

Site survey of 1,865 ha (4,605 ac) along highway relocation alternates transecting the Iowa River valley (Hardin County, Iowa) has provided archaeological data from the western periphery of the Eastern Woodlands. Among the project's more interesting contributions is new information about the Woodland period adaptations of interior Iowa vis-a-vis extreme northeastern Iowa. Early/Middle and Late Woodland components have been identified, including outlying manifestations of the Effigy Mound "culture". It is suggested that close cultural ties between the project locality and the McGregor/Prairie du Chien area (upper Mississippi River valley) were important throughout the Woodland stage.

Dancey, William S. (Ohio State) [10]  
THE BLADELET INDUSTRY AT THE MURPHY SITE, A MIDDLE WOODLAND SETTLEMENT IN  
CENTRAL OHIO

The chipped stone assemblage from the Murphy site (33-Li-212), an early Middle Woodland settlement on Raccoon Creek in Licking County, Ohio, contains an abundant sample of industrial debris from bladelet manufacture. This paper summarizes the Murphy sample of this industry and analyzes it from the perspective developed by Pi-Sunyer for the McGraw site and Greber et al for the Liberty Works. A major objective of the analysis is determining the function of the bladelet industry in Ohio Hopewell society.

Denny, J. Peter (Western Ontario) [2]  
THE ALGONQUIAN MIGRATION FROM THE COLUMBIA PLATEAU TO THE MIDWEST, CIRCA  
1800 BC: CORRELATING LINGUISTICS AND ARCHAEOLOGY

In view of the established genetic relations to Wiyot and Yurok, and areal similarities to Salishan and Kootenay, Proto-Algonquian was probably spoken in the Columbia Plateau. Yet the area of greatest diversity for the Central Algonquian languages is the Ohio River-Lake Michigan region; this is the most likely focus from which Algonquian speech spread throughout the Northeast, probably by language switching which was first stimulated by Red Ocher, Glacial Karne and Adena ceremonialism and exchange. Thus, a migration occurred whose origin appears to be the Western Idaho Archaic Burial complex, which flourished east of the south-to-north stretch of the Snake River, 2500-2000 BC. The end-point seems to be Red Ocher, 1500-500 BC, since there are many unique similarities between the Western Idaho and Red Ocher traditions, including turkey-tail mortuary blades and caches of ovate-trianguloid points.

Dirst, Victoria (Wisconsin Department of Natural Resources) [8]  
RESPONSE TO LAKE LEVEL FLUCTUATIONS IN NORTHEASTERN WISCONSIN

Fluctuations in the level of Lake Michigan have had a significant impact on settlement patterns in northeastern Wisconsin. This paper focuses on how high and low water episodes affected fishing in this region from the Middle Archaic through the Late Woodland period. It is suggested that low water may have been a factor in bringing about Oneota nucleation in the Lake Winnebago Phase.

Dobbs, Clark A. (Institute for Minnesota Archaeology) [11]  
SETTLEMENT PATTERNING AT THE ADAMS SITE (47P112): AN ONEOTA SITE WITHIN THE  
RED WING LOCALITY

The Adams Site (47P112) is an Oneota village and mound complex which covers more than 60 acres along a terrace overlooking the Mississippi River in western Wisconsin. Controlled surface collection, excavation, and archival research have been used to recreate the community plan of the site. A series of well defined artifact concentrations which probably represent the remains of middens are scattered across the site and these are surrounded by more than 90 mounds. Deep trash pits do not seem to be an integral part of the community plan and the site seems distinctively different from Silvernale Phase sites within the Red Wing Locality.

Doershuk, John F., Christopher A. Bergman and David J. Rue (3D/Environmental Services, Inc., Cincinnati) [12]  
RIVERTON CULTURE LITHICS: TECHNOLOGICAL AND SPATIAL ANALYSES OF THE  
ATTERBURY SITE (12-B-815), BARTHOLOMEW COUNTY, INDIANA

Recently completed analyses of materials from the Atterbury site (12-B-815), Bartholomew County, Indiana, were aimed at the identification of specific lithic reduction strategies, a functional analysis of the lithic tool assemblage, investigation of site organization and community patterning, and an assessment of the ceramic assemblage. This paper presents technological and spatial data and describes patterning in the chipped stone assemblage as it relates to reduction and depositional sequences. As little previous research on these topics

has been conducted in this part of the state, comment is directed toward the role of the site in the larger settlement system of central Indiana during the Riverton phase of the Late Archaic.

Emerson, Thomas E., Ray Perkins, and Richard Fischel (Illinois Historical Preservation Agency) [6]

**THE MCFARLAND SITE: PRELIMINARY RESEARCH ON THE LATE MISSISSIPPIAN OCCUPATION OF THE MISSISSIPPI RIVER SNY BOTTOM LOCALITY IN ILLINOIS**

Aerial reconnaissance, pedestrian survey, and local collector information have demonstrated the presence of a previously unknown late Middle Mississippian presence in the Sny Bottom locality in Pike County, Illinois. Aerial photos of a bluff/terrace outlier indicate the presence of a nucleated village complete with structures surrounding a central plaza area. An additional small scattering of solitary structures has been located outside the main village. A nearby platform mound may also be associated with the McFarland Cordmarked jars and Well Incised plates suggesting a 14th-century occupation. Future research on this complex will provide important information on the lifeways of Late Mississippian peoples in the Mississippi River Valley north of the American Bottom after the Cahokian decline.

Erickson, Annette G., and C. George Hinkle (Archaeological Data Services, Inc., Columbus OH) [2]

**MOVING FLOTATION INDOORS**

Increased demand for paleoethnobotanical analysis in CRM has increased dramatically the number of samples which need to be processed. Flotation is usually conducted outside, weather permitting, during a relatively short field season. Problems with conducting flotation in the lab include: the necessity to decrease sample size and the increase of the time involved in manual processing. A system has been devised to process samples indoors mechanically without having to decrease sample volume. A SMAP (Watson 1976) type machine has been modified with an internal pump to easily and quickly remove waste sediments. Water flow is channeled to accommodate any large sink and sediment trap.

Esarey, Duane (Dickson Mounds Museum)

**COURTING THE BLACK SAND/MORTON MUSE: CERAMIC TYPOLOGY AND EARLY TO MIDDLE WOODLAND CONTINUITY IN THE CENTRAL ILLINOIS RIVER VALLEY** [10]

Consistently small and contextually unsecured ceramic assemblages have caused the Early Woodland incised-over-cordmarked and punctuated-over-cordmarked ceramics of the central Illinois River Valley to remain in relative typological stagnation. When first marshalled into formal types nearly forty years ago, the types Black Sand Incised, Sister Creeks Punctuated, and Morton Incised were originally exclusively Early Woodland Period ceramics. Their definition (Griffin 1952) was structured to emphasize Middle Woodland Havana Culture ceramics. Although typological applications through the years drifted somewhat from original definitions, no serious contest to a perspective of Black Sand to Havana Culture continuity was put forth until the "Twin Tradition" model of Early Woodland cultures was proposed this last decade (Munson 1982, 1986). However, analysis of a large body of newly-collected ceramics, itself much larger than the total previously available sample, contradicts key tenets of the Twin Tradition model. This paper presents the historical background of this problem and examines formal and distributional traits of the newly-collected body of Early Woodland ceramics. Implications to taxonomy and culture historical interpretations are reviewed.

Esarey, Duane, and James Doolittle (Dickson Mounds; Soil Conservation Service, USDA) [10]

**GROUND-PENETRATING-RADAR SURVEY OF THE ROCKWELL MOUND, HAVANA, ILLINOIS**

A transect survey by ground-penetrating-radar (GPR) was carried out on the Rockwell Mound in Havana, Illinois in June 1990. Use of GPR verified previous indications that the nearly two-acre structure is of a cultural origin. Nine profiles of the Middle Woodland mound gave insights into the internal structure of the mound by showing what appear to be the previous ground surface under and a possible construction stage within the mound. The sandy mound fill produced a radically different radar signature than that of a nearby sand dune

transected with identical equipment settings. Computer generated contour and surface net maps for Rockwell Mound are additional by-products of the GPR survey. Interpretation of the numerous anomalies and "point objects" plotted within the mound remains problematical without excavation. In spite of specific profiling depth limitations in moderately fine and fine textured soils, it is clear that GPR can be useful as both a means of non-invasive study as well as a tool to structure anticipated excavations.

Esarey, Mark E. (Museum, Michigan State) [1]  
1999 EXCAVATIONS AT FT. GRATIOT, PORT HURON, MICHIGAN

Ft. Gratiot (20-Sc-41) was a 19th-century American fort built to defend the Canadian border. The site lies on a terrace overlooking the St. Clair River rapids just below the outlet of Lake Huron where it performed a strategic function of controlling naval and merchant shipping. The remnants of one First Fort (1814-1821) building at the southwest corner of the parade ground were investigated, including two cellars, two fireplaces, two wooden chimney foundations, and 21 postholes. Also investigated was a ditch running from the gate toward the parade ground. Second Fort (1828-1879) commander's office, an 1830s gate structure with a brick floor, and a building used in the 1830s as a hospital and surgeon's quarters and afterwards as an officer's quarters.

Ferguson, Jacqueline A. (Illinois State Museum) [12]  
ARCHAIC STRATEGIES OF CHERT PROCUREMENT AND SETTLEMENT MOBILITY IN NORTH-CENTRAL ILLINOIS

Lithic artifacts recovered from surface collections at Early Archaic (10-8 k BP) and Middle Archaic (8-5 k BP) period sites from an 82 km long highway corridor (Interstate 39) show significant temporal and spatial variation in terms of artifact categories and the types and source locations of lithic raw material. These patterns have important implications for modeling the dynamics of settlement mobility and lithic technology in the region. At one Middle Archaic site there is significant variation in the chert sources represented in different concentrations of surface artifacts which may reflect differences in the upland routes or pathways used by various groups of mobile hunter and gatherers.

Gartner, William Gustav (Wisconsin-Madison) [11]  
A FIELD REPORT ON THE HULBURT CREEK RIDGED FIELDS, WISCONSIN

The Hulburt Site, located within the Wisconsin Dells cluster of raised fields, contains unusually well preserved ridged fields of heretofore unreported size in the Upper Midwest. These sinuously shaped agricultural fields, roughly aligned 10° East of North, typically measure 40 cm in height, 2 m in width, and 10 m in length throughout the dendritic headwaters of Hulburt Creek. The 1990 excavations yielded several paleosols documenting ridged field construction and rebuilding; agroecological functions of hydrology, fertility, and frost drainage; two "earth ovens"; stone tools; and charred seeds. A regional survey is underway to establish cultural affiliations.

Greber, N'omi, and William Pickard (Cleveland Museum of Natural History; Ohio State) [10]  
PRELIMINARY RESULTS OF EXCAVATIONS IN CAPITOLIUM MOUND, MARIETTA EARTHWORK, WASHINGTON COUNTY, OHIO

The Marietta Earthwork included a complex set of enclosures and mounds. Capitoliium is one of three flat topped mounds with attached side ramps which were within a nearly square enclosure. Such mounds are rare in Ohio. Small scale excavations this summer in section of Capitoliium where an elevator is to be constructed recovered Middle Woodland lithics and ceramics. These artifacts were associated with an intricate series of carefully constructed, superimposed activity floors and platforms. It is hoped that analyses in process will result in a more exact chronological placement for the mound's construction.

Green, William, E. Arthur Bettis III, Blane Nansel, and Mary K. Whelan (Iowa Office of the State Archaeologist, Geological Survey Bureau; Wisconsin-Milwaukee; Iowa) [8]

**INTERDISCIPLINARY INVESTIGATION OF ALLUVIAL FANS IN SOUTHEASTERN IOWA**

A coordinated program of geological, archaeological, and paleobotanical studies is focusing on alluvial fans and adjacent wetlands along the western margin of the Mississippi Valley south of Muscatine, Iowa. The fans descend to and bury older parts of an extensive wetland that formed ca. 10,000 BP. A series of continuous core samples extracted from depths as great as 12 m show that buried parts of the wetland are overlain by ca. 9,500 BP Lake Superior-source "red" clays deposited during early Holocene catastrophic Mississippi River floods. Several buried soils, some with associated Archaic middens, are present within the stratified alluvial fan deposits. Charred floral material and terrestrial gastropods are abundant in several zones within the fans. The present fan surfaces have been relatively stable for the past ca. 2,500 years. Controlled surface collections show that near-surface archaeological remains include extensive Black Sand (Early Woodland) occupations, an intensively occupied Havana (Middle Woodland) habitation and possible ceremonial complex, and a Weaver (Late Woodland) "ring midden" community.

Häckenberger, Steven (University Wisconsin Centers) [4]

**MACKTOWN ARCHAEOLOGICAL INVESTIGATIONS, WINNEBAGO COUNTY ILLINOIS**

Proton magnetometer and electron resistivity surveys were conducted with archaeological testing to identify the location of historic structures (ca. 1835) and confirm the presence of an early Late Woodland habitation site at the confluence of the Rock and Pecatonica Rivers. The site explorations involved students enrolled in a pre-college program as well as members of a local historical society. Results indicate the site will yield significant data on historic trade and Woodland settlement and subsistence on the Rock and Pecatonica Rivers.

Hambacher, Michael J. (Michigan State) [7]

**BETWIXT AND BETWEEN THE NORTH AND SOUTH: A LATE WOODLAND CERAMIC SEQUENCE FROM THE GRAND TRAVERSE BAY REGION OF MICHIGAN**

Excavations at the Skegemog Point site (20GT2), Grand Traverse County, Michigan, in 1965 and 1966 produced a large ceramic assemblage spanning the Late Woodland period. Preliminary analysis of this assemblage identified three distinct and sequential ceramic wares, each composed of a number of types. Bowerman and Skegemog wares are associated with the initial phase of the Late Woodland period. While Traverse wares are associated with the terminal phase. Recent reanalysis of this assemblage has verified and expanded the original typology. The three wares and their constituent types will be briefly described. Comparisons with other extant ceramic types to the north and to the south of the Grand Traverse Bay region will be made. Finally, inferences concerning the ebb and flow of cultural influences and patterns of interaction along the west coast of Michigan will be made.

Hedman, Kristin, and Michael Meinkoth (Illinois) [4]

**A PRELIMINARY REPORT ON THE MIDDLE ARCHAIC MORTUARY AND HABITATION AREA AT THE TREE ROW (11-F-53) SITE, FULTON COUNTY, ILLINOIS**

Recent excavations at the Tree Row site, a multi-component mortuary/habitation site in the Illinois River valley, have yielded 524 features. Ninety-two (Middle Archaic) burial features were excavated and the remains of 121 individuals recovered. This paper will discuss the demography and paleopathology of this population. A preliminary interpretation of the Middle Archaic component will be presented relating human biological information to environmental and cultural characteristics of the site. Analysis of these materials promises to contribute to a better understanding of the adaptive fitness of the Tree Row population and of mortuary practices and subsistence/settlement patterns for the Middle Archaic in the Midwest.

Hirst, K. Kris (Iowa Office of the State Archaeologist) [8]  
SPATIAL ASPECTS OF UPLAND LIVING: CHOICES WITHIN THE PRAIRIE PENINSULA

A total of 86 prehistoric lithic scatters were recovered within a 42 km long north/south corridor situated within the Prairie Peninsula in southeastern Iowa. Only nine of the sites contained diagnostic materials, ranging in age from Late Paleoindian through Proto-Historic. Taken as a whole, however, the 86 sites exhibit spatial patterning with respect to the distribution of artifacts and debitage from an easily recognizable but not particularly desirable lithic source, and with respect to the available permanent water sources. Results suggest that large scale CRM studies may be utilized to produce useful information concerning the issues of prehistoric residential choice and population movement.

Hirst, K. Kris, and Robert G. Thompson (Iowa Office of the State Archaeologist; Iowa) [9]  
TRACING THE USE OF FRESHWATER NAIAD SHELLS AS PREHISTORIC IMPLEMENTS THROUGH SCANNING ELECTRON MICROSCOPY AND X-RAY MICROANALYSIS (poster paper)

Many freshwater naiad shells recovered from Plains village sites have edges exhibiting patterns of use-wear. The ethnographic and ethnohistoric records contain accounts of the use of these shells in the removal of kernels from corncobs. Patterns of use-wear traditionally thought to represent "corn shelling implements" include a flattened ventral edge identified as the working edge. Experiments replicating the removal of corn kernels from modern day sweet corn with the use of a naiad shell have failed to reproduce the flattened ventral edge. Scanning electron microscopy was used to identify opal phytolith residue on the experimental edge, but rarely on the archaeological specimens.

Jeske, Robert J. (Indiana-Purdue at Fort Wayne) [5]  
THE YOUNG JIM SITE: A STARVED ROCK COLLARED OCCUPATION IN THE UPPER ILLINOIS RIVER VALLEY

The Young Jim site is a Late Woodland occupation on the floodplain of the Upper Illinois river. A small midden deposit yielded Starved Rock Collared ceramics, floral and faunal remains, and a radiocarbon date of AD 1015. The site provides data on the Late Woodland/Emergent Mississippian transition and the shift to early maize horticulture in northern Illinois.

Jones III, J. R., Gary D. Ellis, Donna K. Oliva, Lisa A. Maust, and Amy Johnson (Indiana Division of Historic Preservation and Archaeology) [8]  
A CRM DATABASE MODEL OF LATE ARCHAIC OCCUPATIONS IN SOUTHWESTERN INDIANA

A comprehensive, computerized site inventory database has been developed for the coalfields region of southwestern Indiana. The database is useful for the planning, management, and protection of endangered archaeological resources in this region, as well as research into the nature and patterning of its prehistoric cultural occupations. Using the database, a predictive, locational model of Late Archaic occupations in the area – with particular emphasis on soil types – was developed and field tested. Results of the modeling, comparison with other Late Archaic models for the region, and the advantages and limitations of the database are discussed.

Kelly, John E. (SIVE) [6]  
THE PULCHER TRADITION AND ITS ROLE IN THE DEVELOPMENT OF MISSISSIPPIAN IN THE AMERICAN BOTTOM

Investigations in the American Bottom over the last three decades have provided a wealth of new data relevant to the delineation of the processes resulting in the development of Mississippian society. The emergence of at least two major traditions in the American Bottom at the end of the Late Woodland tradition were important to such transformations. The southernmost of these two traditions will be examined in terms of its role in the development of Mississippian and the rise of Cahokia as a distinct socio-political entity between AD 900 and 1100.

Kullen, Douglas (Allied Archaeology, Aurora IL) [5]  
TEACHING TEACHERS ABOUT ARCHAEOLOGY: THE 1989 SUMMER FIELD SCHOOL IN  
NAPERVILLE, ILLINOIS

A cornfield containing six prehistoric sites ranging in age from the Paleoindian to Early Woodland Periods was the stage for the 1989 Archaeology Field School from Northern Illinois University. Grade school and high school teachers were recruited to participate in the program, which was specifically designed to teach them about archaeology and anthropology, so that they could pass this knowledge on to their students. Classroom and laboratory sessions supplemented the fieldwork, which consisted of test excavations at four sites and block area excavations at an Early Archaic camp and a Late Archaic lithic workshop, all on the morainal uplands in Naperville, Illinois.

Kullen, Douglas, and Lynn Malinowski (Allied Archaeology, Aurora IL) [10]  
THE PHOTON SITE: AN ARCHAIC SETTLEMENT IN THE FORESTED UPLANDS OF  
NORTHERN ILLINOIS

Investigations at the Photon site revealed a first glimpse of Archaic hunter-gatherer lifeways in the uplands of northern Illinois. Located in an undisturbed, unplowed context, the Photon site yielded evidence of prehistoric activities and subsistence in the forested morainal country west of Lake Michigan. The site appears to have been a seasonally-occupied camp, the inhabitants of which hunted forest animals and collected wild plant foods native to the oak-hickory biome. Intrasite artifact distribution indicates a series of activity areas, some of which suggest a sexual division of labor, the use of local chert sources, and the processing of plant and animal resources.

Lurie, Rochelle, and Elizabeth Goldsmith (Midwest Archaeological Research Services) [5]  
A REVIEW OF FERMILAB ARCHAEOLOGY 1970-1990: A STUDY IN UPLAND SETTLEMENT  
PATTERNS

In 1970 and 1971, Ann Early conducted survey and testing on over 6400 acres of uplands between the Fox and DuPage Rivers that became Fermi National Accelerator Laboratory. She defined 24 sites and tested five of them. After a hiatus of 15 years, survey and testing on Fermilab resumed. In the past four years, eight prehistoric sites and at least 20 historical sites have been added to the data base. This data emphasizes the importance of upland resources in the settlement patterns of Archaic and Mississippian people in northern Illinois, and contributes to our knowledge of pioneer life on the prairie/forest edge.

Lynott, Mark J. (Midwest Archaeological Center, NPS) [5]  
PREHISTORIC OCCUPATION OF THE CALUMET DUNE RIDGE, INDIANA DUNES NATIONAL  
LAKESHORE, NORTHWEST INDIANA

Intensive survey of 182 acres along the Calumet Dune Ridge in Indiana Dunes National Lakeshore resulted in the identification of 15 prehistoric and one historic archaeological sites. Testing at 12 sites indicates that the prehistoric sites were occupied intermittently for the purpose of exploiting nearby wetland resources. Temporally diagnostic artifacts associated with the sites are limited, but an intensive Late Woodland occupation is indicated. Ongoing research is aimed at collecting larger samples of material culture, additional information about changes in site function through time, and dateable materials to establish a more precise local chronology.

Madsen, Mark, and Kevin Christensen (Glendale Heights IL) [2]  
A GREAT LAKES FORE-AFT RIGGED SCHOONER FROM THE MID-19TH CENTURY

This presentation will deal with the structural analysis of the floor remains of an unknown schooner wrecked at the mouth of Helms Creek in Door County, Wisconsin. It will trace the antecedents of the framework and fastenings excavated by our team.

With the guidance of State Underwater Archaeologist David J. Cooper, and after research from numerous sources in shipbuilding, a tentative reconstruction of the size and appearance of the ship was made.

At least 1,700 schooners were engaged in trade on the Great Lakes by the 1870s, and often newspaper articles of that era regarding shipwrecks were fragmentary. As a result, the Heins Creek shipwreck may be any one of those documented by Frederickson at Bailey's Harbor. It has also been suggested that this ship may have been the *Illinois*, which was built at St. Joseph, Michigan, in 1848 with a length of 94.45 feet and beam of 20.7 feet. The *Illinois* was shipwrecked somewhere south of Bailey's Harbor in 1873. Another fore-aft schooner of 80 feet and 20-foot beam called the *Illinois* was the first shallow-draft centerboard ship to make it over the 4-foot sandbar at the mouth of the Chicago River to set settlers ashore in 1834, but this progenitor had sunk in Lake Erie and not Lake Michigan, according to J. H. Beers in *History of the Great Lakes* (1899).

Mansberger, Floyd, and Joseph Phillippe (Fever River Research; Midwest Archaeological Research Center, Illinois State) [1]  
THE EARLY 1870S FARMERS' MARKET: CERAMIC AVAILABILITY AND ECONOMIC SCALING AT THE FARMERS' HOME HOTEL, GALENA, ILLINOIS

In 1867, Casper and Balthazar Vogel constructed the Farmers' Home Hotel in Galena, Illinois. These German-born entrepreneurs established a small 12-room hotel, bakery, saloon, restaurant, slaughter house and store that catered to the rural farm community of northwestern Illinois. Although bakers by trade, the Vogels dealt in a wide variety of manufactured goods as well as rural commodities. A price list for four crates of ceramic wares potentially purchased during one of the Vogels' Chicago or East Coast buying trips was found within a handwritten recipe book once used by the Vogel brothers. Based on this price list, this paper will discuss the ceramic wares most likely available to the rural Illinois community immediately after the Civil War. Additionally, this paper will discuss the utility of the economic scaling of post-Civil War archaeological ceramic assemblages.

Marshall, James A. (Schaumburg IL) [2]  
THE PREHISTORIC PARALLEL STRAIGHT WALLS OF EASTERN NORTH AMERICA EXAMINED FOR ASTRONOMICAL ORIENTATION

These walls are popularly believed to be oriented to the rising or setting points of the sun, moon, stars, etc. If so, such lines would show a progressive change in azimuth with increasing latitude north of the Equator. To test this belief, we will consider about twenty such sites starting with the southernmost, in Florida south of Lake Okeechobee, and proceed one by one to the northernmost site, at Newark, Ohio. The total latitude difference is about 12.5°.

McCullough, Roger G. (Southern Illinois-Carbondale) [7]  
A REANALYSIS OF CERAMICS FROM THE BOWEN SITE: IMPLICATIONS FOR DEFINING THE OLIVER PHASE OF CENTRAL INDIANA

The mixture of Late Woodland and Fort Ancient ceramics found on sites in central Indiana has presented a problem for archaeologists for over 50 years. This unique combination of ceramic traits have become known as the Oliver Phase. Materials recovered from the Bowen Site (Dorwin 1971) have in the past been used to define this phase. Originally, the Bowen Site was believed to represent the excavation of an entire synchronically occupied prehistoric site. An analysis of the distribution of diagnostic ceramic attributes from the Bowen Site suggests multicomponent occupations. Therefore, the full range of ceramic variation originally attributed to this phase needs to be reexamined in the light of this new information.

Milner, Claire McHale, and John M. O'Shea (Michigan) [7]  
LIFE AFTER THE JUNTUNEN SITE?: LATE PREHISTORIC OCCUPATION OF THE UPPER GREAT LAKES

Archaeologists have traditionally argued that large portions of the Upper Great Lakes were abandoned well before European contact. This occupational hiatus ended in the 17th century

with the restructuring of traditional tribal territories and the concentration of populations at a few large settlements. This model contrasts with recent interpretations that emphasize cultural and demographic continuity and underplay the impact of Euro-American contact, thereby justifying the use of 19th century data for the reconstruction of precontact adaptations. New archaeological research on the Juntunen phase suggests that the Juntunen ceramic tradition continues into the Historic period, ca. 200 years after the abandonment of the Juntunen type site. However, the distribution of sites and characteristics of material culture indicates a significant reorientation of subsistence-settlement organization beginning in the 15th century. The temporal placement of this new phase, its salient characteristics, and its place in the long-term development of Woodland to Historic adaptations in the Upper Great Lakes are discussed.

Milner, George R., and Eve Anderson (Pennsylvania State) [6]  
LATE PREHISTORIC WARFARE IN WEST-CENTRAL ILLINOIS

Regional competition and cooperation are critical elements of models of cultural evolution. Despite the presumed significance of such interactions, their critical evaluation presents particularly intractable problems for archaeologists. Oneota skeletons from the Norris Farms 35 site in Illinois illustrate the unique information that only mortuary-related research can provide on the characteristics of prehistoric intergroup conflict, including its intensity and consequences. In this instance, chronic warfare resulted in a heavy loss of life (one-third of all adults), and it appears to have had a detrimental effect on the lives of community members.

Milner, George R., and Sissel Schroeder (Pennsylvania State) [6]  
CAHOKIA AREA SURVEY PROJECT: RESEARCH OBJECTIVES AND COLLECTIONS

During the past summer a two-year collections and records based project was initiated that focuses on the late prehistoric cultural horizons in the Mississippi River valley in Illinois and Missouri from present-day Alton IL to Cape Girardeau MO. This project is designed as the first stage of an anticipated long-term research program oriented toward the clarification of the cultural, ecological, demographic, and human biological correlates of the development and subsequent dissolution of one of the most organizationally complex Precolumbian societies in the Eastern Woodlands. Project objectives, the rationale for the initial focus on the extant collections and site records, and preliminary findings are presented.

Morrow, Toby A. (Center for American Archeology) [12]  
TOWARD A REFINED ARCHAIC PROJECTILE POINT SEQUENCE FOR WEST CENTRAL ILLINOIS

Excavations at the stratified Twin Ditch site provide new data on the chronological placement of several Early and Middle Archaic point and knife styles. Horizon 2 has yielded several Thebes knives and St. Charles points in contexts dating between 9750 and ca. 9000 BP. The recent recovery of two Dalton points from Horizon 2 underscores important issues of evaluating archaeological contexts and patterns of stylistic change. Horizon 1 contains a variety of later Early and Middle Archaic point styles including Hardin, Kirk, Stanly, Robinson, and an early Middle Archaic lanceolate form.

Munson, Cheryl Ann, and Patrick J. Munson (Kentucky Anthropological Research Foundation; Indiana) [8]  
ARCHAEOLOGICAL DATING OF PREHISTORIC EARTHQUAKE FEATURES IN THE LOWER WABASH VALLEY

Geologists from the U.S. Geological Survey have discovered physical indications (liquefaction features) of one or more major earthquakes in late Pleistocene and Holocene deposits in the lower Wabash Valley. Preliminary research has demonstrated that some of the earthquake features occur above, below, or through datable archaeological deposits. Archaeological data provide the means to bracket the age of the earthquake event(s) and to determine the periodicity of significant seismic activity.

Murphy, Harry (Ohio Department of Transportation) [2]  
BUREAUCRACY AND ETHICS

Basic sociological concepts concerning bureaucratic structures are applied in an initial analysis of the role of the archaeologist within the larger bureaucracy of the Ohio Department of Transportation/Environmental Services. Organizational problems often result in placing the staff archaeologist in professionally compromising positions. Efforts of the archaeologist to maintain professional integrity can run counter to the immediate bureaucratic objectives.

O'Gorman, J. A., R. E. Hollinger, and J. A. Vradenburg (Wisconsin-Milwaukee & Wisconsin State Historical Society; Missouri-Columbia & Wisconsin State Historical Society; Missouri-Columbia & Wisconsin State Historical Society) [9]  
IMPRESSIONS FROM THE FIELD: ONEOTA HOUSES AND BURIAL PRACTICES

Recent excavations at the Tremaine site (47-Lc-95) in southwestern Wisconsin have produced exciting information on Oneota habitation and burial practices. Several structures (probably longhouses), human burials, and hundreds of trash/storage pits have been excavated. The near total excavation coverage of this portion of the site will provide a rich data base for exploring questions of social, economic, and ritual importance for Oneota studies in particular. These topics, in conjunction with spatial analysis, could also prove valuable to archaeology in general. While the excavation presently continues on the site, this paper presents preliminary data on the house structures and human burials along with our field impressions of patterning of these and other features.

Orr, Marilyn R., Myra J. Giesen, Paul W. Scjulli, and Kolleen R. Butterworth (Ohio State; Ohio Department of Transportation) [2]  
STATURE VARIATION AMONG AMERICAN CIVIL WAR SOLDIERS

This study was undertaken to collect data on stature variation in American born and foreign born males from the first half of the 19th century and to determine what social/environmental factors were responsible for the differences. Males (n=4453), ages 16 through 46 were surveyed. Data were collected from the Ohio Historical Society archives of the Adjutant General's muster rolls from the American Civil War from Tod Barracks located in Columbus, Ohio. Data included age, birthplace, stature, and occupation. American born males were significantly taller than both Afro-American and foreign born males. As in the Colonial period, the major factor responsible for stature differences seems to be nutritional.

Pauketat, Timothy R. (Michigan) [6]  
MAKING THE MASSES MISSISSIPPIAN: THE RESTRUCTURING OF THE TRACT 15A COMMUNITY AT CAHOKIA, A.D.1000±50

The social landscape of Cahokia underwent tremendous change at the point archaeologists recognize as the Emergent Mississippian-Mississippian interface. Prehistoric events inferred from an analysis of Tract 15A include the dissolution of small corporate entities as the basis of social order and the emplacement of larger-scale organizational structure. The productive energies of households appear to have been integrated within the new order. This restructuring, and the "appearance" of Mississippian architectural and artifact styles, are interpreted to be correlates of the emergence of a powerful Cahokia elite.

Riley, Thomas J., and Chaksana Said (Illinois-Urbana/Champaign) [11]  
AN ANALYSIS OF SOILS FROM THE PUTATIVE RIDGED FIELDS AT THE LUNSFORD-PULCHER SITE (11S40), ILLINOIS

Two decades ago Melvin Fowler suggested that linear patterns visible in aerial photographs at the Lunsford-Pulcher Site represented the remains of Mississippian ridge and furrow agriculture. Archaeological research by Porter and Freimuth in the early 1970s concluded that the patterns observed there were due to aeolian sand dunes formed over modern farmland during a massive drought in 1954. Soil samples from a trench through the area where the patterns were reported at Lunsford-Pulcher were analyzed to determine whether

the soils representing the ridges at the site were aeolian or alluvial in nature and whether the soils themselves were modern or "pre-industrial". Particle size analysis suggested an alluvial origin for the sands, while an analysis of magnetite spherules that are the result of fly ash deposition clearly indicates that the soils were laid down before the 20th century. Neither of these analyses, however, confirms that the ridges at Lunsford-Pulcher are related to prehistoric agricultural activity at the site.

Ruby, Bret J., Stephen Ball, and Mark R. Schurr (Glenn A. Black Laboratory, Indiana) [10]  
INVESTIGATIONS OF THE GRABERT SITE: A MANN PHASE MIDDLE WOODLAND SITE IN  
SOUTHWESTERN INDIANA

Surface surveys and excavation were conducted at the Grabert site (12 Po 248) to obtain information about domestic activities during the Mann phase and to evaluate the effectiveness of the proton magnetometer for identifying subsurface archaeological features. Excavations uncovered portions of circular structures and associated pits representing the remains of a Mann phase warm-season occupation dated to around A.D. 150. Excavation also revealed that the surface distribution of artifacts was a poor indicator of the subsurface distribution of intact features identified through magnetometry.

Ruhl, Katharine C. (Cleveland Museum of Natural History) [10]  
OHIO HOPEWELL EARSPHOOLS: FORM AND FUNCTION

In the Hopewell mounds of Ohio biconical copper ear spoils were found in several locations other than at the ears of burials. Ear spoils might be placed in the hands and other positions on or near burials, with cremations, and among deposits on the "altars" without associated burials. These locations can be shown to vary in accord with a chronological evolution in the style of the ear spoils, suggesting changes in the use and symbolic significance of these artifacts during the Hopewell period.

Salzer, Robert J. (Beloit) [6]  
RED HORN AND THE WILLIAMS-GOGGIN HYPOTHESIS

Ongoing research at a rockshelter in southwestern Wisconsin is producing hard data that are currently interpreted as shedding light on the Williams-Goggin Hypothesis for an early Mississippian horizon that is identified by the presence of the so-called "Long Nose God" maskette. The Wisconsin data, in conjunction with information derived from Siouan oral literature and newly-discovered rock art, supports that hypothesis and suggests the existence of an early, proto-Mississippian trans-ethnic, ancestor cult that played a critically important role in the emergency of Mississippian and related peoples' ideologies in eastern North America around A.D. 1000.

Sasso, Robert F. (Northwestern) [11]  
WISCONSIN AGRICULTURAL LOCI: AN AGENDA FOR FUTURE RESEARCH

One notable feature of Wisconsin archaeology is the multitude of agricultural sites, including ridged field, garden bed, and cornhill sites, as well as other loci of aboriginal cultivation. Research into the nature and significance of these sites begins with descriptions that date from the 1830s or earlier, and has continued through a series of functional studies conducted in recent years. Future research into these agricultural loci holds great promise for informing us about a variety of significant aspects of aboriginal lifeways. An agenda for future research is outlined herein building upon the research of the past and emphasizing a series of topics, including cultural variation in agricultural practices, paleodemography, and man-land relationships.

Schurr, Mark R., and Sherri L. Hilgeman (Glenn A. Black Laboratory, Indiana) [6]  
FLUORIDE DATING AND POTTERY CHRONOLOGY AT ANGEL

The relative fluoride contents of prehistoric bone can be used to develop fine-scale relative chronologies for prehistoric human burials and other features that contained bone. In this

paper, we report on an attempt to order a series of pits containing faunal material and chronologically sensitive pottery from the Angel site. The pottery and fluoride chronologies agree, confirming the chronological trends for diagnostic pottery at Angel and showing that fluoride dating of faunal materials can be used to assign relative dates to features. The fluoride contents of animal bone are also sensitive indicators of mixed contexts.

Shaffer, Mark (Midwest Archaeological Research Services) [5]  
HISTORY AND ARCHAEOLOGY OF TWO 19TH CENTURY FARMSTEADS IN WILL COUNTY,  
ILLINOIS

Over the past three years, Midwest Archaeological Research Services has surveyed and tested nine historical sites on the Joliet Army Ammunitions Plant. Many of these sites were first occupied with Reeds Grove, the earliest settlement in Will County, was established. Two of these sites, both 19th century domestic farmsteads, are the focus of this paper. Historical documentation indicates that both were occupied from the mid-1800s until the early 20th century. Undisturbed cultural deposits dating to the earliest periods of occupation are present at both sites. Information from these deposits highlights the economic and social interrelationships of this early pioneer community.

Stoltman, James B. (Wisconsin-Madison) [12]  
THE PRESTON PHASE, A NEWLY RECOGNIZED EXPRESSION OF THE LATE ARCHAIC  
STAGE IN SOUTHWESTERN WISCONSIN

The Preston Rockshelter (47G1157) was excavated in Harris Palmer in behalf of the UW-Platteville in the late 1960s. Subsequently, these materials were donated to the UW-Madison, where their analysis has been ongoing for a number of years. The results of this analysis suggest that a previously unrecognized Late Archaic cultural complex was buried beneath a Durst component. Radiocarbon dates from charcoal collected in the Preston and Durst levels suggest an age for a proposed Preston phase of ca. 800-1000 BC. Comparison with other rockshelters in the Driftless Area of southwestern Wisconsin indicates that this phase warrants recognition at other sites as well.

Stout, Charles (Museum of Natural History, Illinois) [2]  
G-K DIRECTIONAL VARIANCE ESTIMATION METHOD FOR SURFACE COLLECTION COUNT  
DATA

A new method for identifying and evaluating spatial patterning has been developed for use with surface collection count data. The method, a hybridization of Goodall's (1974) random pairing of quadrats and Kershaw's (1957) quadrat transects, derives variance estimates that are used in delineating and describing artifact distribution patterns. This paper briefly describes the method, and uses a case study to demonstrate appropriate uses and advantages over some other methods, as well as logistical and interpretive limitations.

Tankersley, Kenneth B., Michael D. Wiant, and Francis R. Knight (Illinois State Museum) [12]  
RECENT INVESTIGATIONS AT THE BOSTROM SITE: AN EARLY PALEOINDIAN WORKSHOP-  
HABITATION IN SOUTHWESTERN ILLINOIS

Bostrom is a low density, multicomponent site located near the confluence of Ogles and Silver creeks, tributaries of the Kaskaskia River, in St. Clair County, Illinois. Early Paleoindian artifacts are widely distributed over a the site's surface. These artifacts include a variety of fluted projectile points and unifacial tools. Based on the technological character of the bifaces, the paucity of debitage, and the diversity of lithic material, we believe that the site was intermittently used as a workshop-habitation.

Trubitt, Mary Beth D. (Northwestern) [5]  
CHICAGO PORTAGE PREHISTORY: EXCAVATIONS AT THE OTTAWA TRAIL SITE

Northwestern University Archaeological Field School tested a site near Laughton's Ford of the Des Plaines River, southwest of Chicago. The site is near the Chicago Portage, which was

used by Jolliet and Marquette in the 1673 journey. Excavations at the Ottawa Trail site have revealed occupation scattered over a 170x250 m area spanning Middle Woodland through Mississippian periods. The main occupations at the low-lying site fall into the Late Woodland period, not well-documented in the Chicago area. The entire site does not seem to have been occupied contemporaneously, and analysis of differences in paste, temper, and decoration of the ceramics should allow a horizontal segregation of the components.

Wahls, Richard R. (Wisconsin-Madison) [8]  
PREHISTORIC UTILIZATION OF THE MISSISSIPPI RIVER FLOODPLAIN IN THE PRAIRIE DU CHIEN LOCALITY, SOUTHWESTERN WISCONSIN

Despite a long history of archaeological research in the region, the possibility of significant sites within floodplain of the Mississippi River has only been seriously considered in the last ten years. Recent survey and testing in floodplain areas of Pool No. 10 of the Upper Mississippi River has provided new evidence regarding the density of prehistoric sites and the types of activities carried out on the floodplain. Certain locations within the floodplain appear to have been selected more often than others, in some cases resulting in deeply stratified multicomponent sites.

Warren, Robert E. (Illinois State Museum) [3]  
PEOPLE AS PALEOENVIRONMENTAL INDICATORS: HOLOCENE SETTLEMENT PATTERNS AND ENVIRONMENTAL CHANGE IN THE EASTERN PRAIRIE PENINSULA

Glacial kettles and other lake basins on the Wisconsinian till plains of north-central Illinois attracted human settlement during much of the Holocene. Archaeological data from the I-39 highway project indicated that Holocene climatic change caused long-term fluctuations in the height of the regional water table, which periodically filled or desiccated lakes at different elevations and attracted or failed to attract human settlement. The ratio of sites on high end moraines to low ground moraines is a proxy measure of water-table elevation. The water table was highest from 10,000-8,000 yr B.P., dropped significantly during the Hypsithermal climatic episode (8000-5000 yr B.P.), and gradually recovered during late-Holocene times.

Wesler, Kit W. (Wickliffe Mounds Research Center, Murray State) [6]  
MISSISSIPPIAN CERAMIC CHRONOLOGY IN THE OHIO-MISSISSIPPI CONFLUENCE REGION: A WICKLIFFE PERSPECTIVE

Excavations at Wickliffe Mounds (15Ba4) in the 1980s have produced a three-period intrasite ceramic chronology. The three divisions are based on varying proportions of decorated and red-filmed pottery documented in consistent stratigraphic relationships. Detailed comparison to other regional assemblages shows that, although the "Middle Wickliffe" assemblage has not been isolated elsewhere, the Wickliffe sequence participates in the ceramic trends seen generally in the Ohio-Mississippi confluence region in the period A.D. 1000-1300+.

Wiant, Michael D., Charles R. McGimsey, and Kenneth B. Farnsworth (Illinois State Museum) [10]  
SIMILARITIES AND DIFFERENCES: REEXAMINING THE MIDDLE WOODLAND OCCUPATIONS AT NAPOLEON HOLLOW

The artifact assemblages from a bluff side feature and flood plain structure at Napoleon Hollow Site consist of unprecedented proportions of Hopewell and highly-decorated Havana wares, lamellar flakes, and non-local materials including obsidian, mica, and Knife River chalcidony. Comparison with other Middle Woodland sites in the lower Illinois River valley indicates Napoleon Hollow was most similar to the Peisker site, identified by Struever (1968) as a mortuary camp. Reexamination of Napoleon Hollow data and additional information from small-scale testing of areas outside the original project area provide new and more detailed insights into the function of these settlements.

Wolforth, Thomas (Illinois Historic Preservation Agency)

[10]

THE MIDDLE WOODLAND STEUBEN MICROSTYLE CONCEPT: AN UPDATE

Excavations at the Ernat Site, 11-Ls-267, in the Upper Illinois River valley, encountered a Middle Woodland component with Steuben ceramics. This information is added to the extant data on the Steuben Havana expression. Struever's (1965) original formulation of the Steuben microstyle concept is examined in light of subsequent archaeological work, resulting in a discussion of the microstyle concept, a proposed expansion of its geographic extent, and a possible reorientation of its chronology.

Yerkes, Richard W., and Albert M. Pecora III (Ohio State; Cultural Resource Analysts, Inc.)

[7]

THE INTRODUCTION OF THE BOW AND ARROW IN THE OHIO VALLEY: A METRIC AND USE-WEAR ANALYSIS OF JACK'S REEF AND TRIANGULAR POINTS FROM THE LATE WOODLAND PARKLINE SITE (46PU99), PUTNAM COUNTY, WEST VIRGINIA

Investigations at Parkline (46PU99) by Cultural Resource Analysts exposed pits dating to the initial (A.D. 300-700) and terminal (A.D. 700-1200) Late Woodland periods. Three broken Chesser/Lowe points were assigned to the early component, while 10 Jack's Reef, six Levanna, and six Madison points (and fragments) were found in late Late Woodland contexts. Microwear and breakage patterns revealed that the points were used as projectiles, but metric and technological analyses shows that while the Chesser/Lowe points were hafted on dart shafts, the triangular points were arrowheads, and the Jack's Reef forms could have been dart or arrow points. Some argue that the appearance of Jack's Reef points marks the adoption of the bow and arrow by local Late Woodland groups, but we suggest that Jack's Reef and Triangular points were brought into the Ohio Valley by Northeastern populations that employed multiple weapon systems that may have included both the atlatl and bow.

the fact that the *de novo* synthesis of cholesterol is inhibited by the presence of dietary cholesterol.

There is a growing body of evidence that the synthesis of cholesterol in the liver is inhibited by the presence of dietary cholesterol. This is particularly true in the case of the rat, where the synthesis of cholesterol is inhibited by the presence of dietary cholesterol (10). In the case of the human, the synthesis of cholesterol is inhibited by the presence of dietary cholesterol (11).

The inhibition of cholesterol synthesis by dietary cholesterol is thought to be due to the fact that the presence of dietary cholesterol increases the concentration of cholesterol in the liver, which in turn inhibits the synthesis of cholesterol (12).

The inhibition of cholesterol synthesis by dietary cholesterol is also thought to be due to the fact that the presence of dietary cholesterol increases the concentration of cholesterol in the plasma, which in turn inhibits the synthesis of cholesterol (13).

The inhibition of cholesterol synthesis by dietary cholesterol is also thought to be due to the fact that the presence of dietary cholesterol increases the concentration of cholesterol in the bile, which in turn inhibits the synthesis of cholesterol (14).

The inhibition of cholesterol synthesis by dietary cholesterol is also thought to be due to the fact that the presence of dietary cholesterol increases the concentration of cholesterol in the feces, which in turn inhibits the synthesis of cholesterol (15).

The inhibition of cholesterol synthesis by dietary cholesterol is also thought to be due to the fact that the presence of dietary cholesterol increases the concentration of cholesterol in the skin, which in turn inhibits the synthesis of cholesterol (16).

The inhibition of cholesterol synthesis by dietary cholesterol is also thought to be due to the fact that the presence of dietary cholesterol increases the concentration of cholesterol in the hair, which in turn inhibits the synthesis of cholesterol (17).

The inhibition of cholesterol synthesis by dietary cholesterol is also thought to be due to the fact that the presence of dietary cholesterol increases the concentration of cholesterol in the nails, which in turn inhibits the synthesis of cholesterol (18).

The inhibition of cholesterol synthesis by dietary cholesterol is also thought to be due to the fact that the presence of dietary cholesterol increases the concentration of cholesterol in the sweat, which in turn inhibits the synthesis of cholesterol (19).

The inhibition of cholesterol synthesis by dietary cholesterol is also thought to be due to the fact that the presence of dietary cholesterol increases the concentration of cholesterol in the tears, which in turn inhibits the synthesis of cholesterol (20).

The inhibition of cholesterol synthesis by dietary cholesterol is also thought to be due to the fact that the presence of dietary cholesterol increases the concentration of cholesterol in the saliva, which in turn inhibits the synthesis of cholesterol (21).

The inhibition of cholesterol synthesis by dietary cholesterol is also thought to be due to the fact that the presence of dietary cholesterol increases the concentration of cholesterol in the urine, which in turn inhibits the synthesis of cholesterol (22).

*Cover Illustration:* Shell mask gorget from the Anker site (11Ck-21), formerly located on the bank of the Calumet River. From a photograph in "The Anker Site" by E. A. Bluhm and A. Liss, *Chicago Area Archaeology* (Illinois Archaeological Survey Bulletin no. 3, p. 134)