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1981 MIDWESTERN ARCHAEOLOGICAL CONFERENCE

OCTOBER 16 - 18, 1981

UNIVERSITY OF WISCONSIN-MADISON

SUMMARY PROGRAM

Friday, October 16

7 - 9 pm REGISTRATION AND OPEN HOUSE
Laboratory of Archaeology, Department of Anthropology
Fifth Floor, Social Science Building
1180 Observatory Drive

Saturday, October 17

J.F. Friedrich Center for Continuing Education
1950 Willow Drive

- 8 - 9 am REGISTRATION Front Lobby
- 9:00 - 10:30 Archaeometry Symposium, Room 154
- 10:50 - 11:40 Volunteer Papers II, Room 154
- 9:00 - 11:40 Volunteer Papers I, Room 16
- 11:40 - 1:30 LUNCH
- 1:30 - 3:10 Current Research on Historical Problems in the 19th Century Midwest
Room 154
- 3:20 - 5:00 Volunteer Papers III, Room 154
- 1:30 - 2:55 Early Woodland Stage, Room 16
- 3:10 - 5:00 Settlement C at the Orendorf Site: Reports on Ongoing Analyses, Rm 16
- 5:30 - 8:00 COCKTAIL PARTY AT THE FRIEDRICK CENTER

Sunday, October 18 Friedrich Center

- 9:00 - 1:00 New Developments in the Cultural History of the American Bottom
Room 16
- 9:00 - 10:30 Impacts of Navigation on Archaeological Resources in the Upper
Mississippi River System, Room 154
- 10:50 - 12:20 Is There a Future for the Past? The Federal and State Programs in
Archaeology, Room 154
- 1:00 BUSINESS MEETING: Who will host the 1982 meetings? Room 16
- 1:10 Conference Adjourned

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

SATURDAY MORNING OCTOBER 17

8am - 9am: REGISTRATION

Front lobby of Friedrich Center

SESSION A Room 154 Friedrich Center

- 9 am - 10:30 ARCHAOMETRY SYMPOSIUM
Thomas Riley, University of Illinois-Urbana
- 9 am: Kansas Pipestones and Calumets
James Gunderson, Wichita State University
- 9:15 ESR Dating of Archaeological Ceramics: Progress to Date
C. Maurer, W.S. Williams & T. Riley, University of Illinois-Urbana
- 9:30 Dietary Applications of Stable Isotope Chemicals in Human Bone Collagen
Lynette Norr, University of Illinois-Urbana
- 9:45 Saline Solution
Carol Stimmel, University of Toronto
- 10:00 Comparative Minerology of Early Woodland Ceramics
James Porter, University of Illinois-Urbana
- Discussion
- 10:30 - 10:50 BREAK. Coffee and Donuts available in lobby
- 10:50 - 11:40 VOLUNTEER PAPERS II (room 154)
- 10:50 Physical and Structural Properties of Ceramic Materials Utilized by a
Fort Ancient Group. Ken Tankersley. University of Cincinnati
- 11:00 Lower Scioto and Adjacent Ohio Valley Ironstone Artifacts as Digging Tools.
Christopher Lindner. University of Cincinnati
- 11:10 Flaked Cobble "Scraper Planes" from SW Ohio: Description of New Late Archaic
Tool Type. Rebecca Hawkins. University of Cincinnati
- 11:20 The Status of Archaeological Estimates of Mortality.
John S. Hewitt. Northwestern University
- 11:30 Discussion
- 11:40 - 1:30 LUNCH

SESSION B Room 16 Friedrich Center VOLUNTEER PAPERS I

- 9:00 Surface Survey at the Hopewell Site, Ross County, Ohio and Competing
Models of Hopewell Settlement.
Mark Seaman, Kent State University
- 9:10 Variation in Hopewell Settlement Pattern and Lithic Industries in the
Vicinity of the Newark Earthworks: Some Preliminary Observations.
C. Wesley Cowan, Bruce W. Aument, Lisa J. Klempay and Leonard Piotrowski.
Ohio State University

- 9:20 Salvage Excavation of the Todd Mound: A Hopewell Burial Mound in
Southwestern Ohio.
Patricia Tanch. University of Cincinnati.
- 9:30 Obsidian from Middle Woodland Sites in Illinois: New Data from the Napoleon
Hollow Site.
Michael D. Wiant and Charles R. McGimsey. Foundation for Illinois Archaeology
- 9:40 The Elizabeth Site: A Middle Archaic and Middle Woodland Site in Westcentral
Illinois.
Steven R. Leigh. University of Tennessee.
- 9:50 Discussion Break
- 10:00 Recent Research on the Effigy Mound Tradition.
William M. Hurley and Gary W. Crawford. University of Toronto.
- 10:10 Prehistoric Trade and Culture Contact: The Apple River, Northwestern Illinois
William A. Janssen. Northern Illinois University, DeKalb.
- 10:20 An Attribute Analysis of Ceramics from the Anderson Village Site,
Southwestern Ohio.
Patricia Essenpreis. Loyola University, Chicago.
- 10:30 - 10:50 BREAK. Coffee and donuts available in lobby.
- 10:50 Sugar Loaf Mound, the Last Mound of the St. Louis Mound Group.
Robert P. Wieggers. University of Missouri-Columbia.
- 11:00 The Fairmount Occupation at the BBB Motor Site.
Douglas Jackson. University of Illinois-Urbana.
- 11:10 Cottage Industries as Mississippian Economic Phenomena and their Detection
in the Archaeological Record.
Guy Prentice. University of Illinois-Urbana.
- 11:20 Microwear, Microdrills and Mississippian Craft Specialization.
Richard W. Yerkes. University of Wisconsin-Madison.
- 11:30 Discussion
- 11:40 - 1:30 LUNCH

SATURDAY AFTERNOON OCTOBER 17

SESSION A Room 154

- 1:30 - 3:10 CURRENT RESEARCH ON HISTORICAL PROBLEMS IN THE 19TH CENTURY MIDWEST
Frederick W. Lange. Midwestern Archeological Research Center,
Illinois State Museum.
- 1:30 The Nature of Inter-site and Regional Variability: A Comparative Study in
Illinois.
Charles R. Smith. U.S. Army Corps of Engineers, Rock Island District.

- 1:45 Summary and Comparison of Seven Historic Sites Affected by the FAI-270 in the American Bottom Region of Southwestern Illinois.
Mark Esarey.
- 2:00 Historical Archeology and the Early Domestic Architecture of Illinois.
Floyd Mansberger. Midwestern Archeological Research Center, Illinois State Univ.
- 2:15 The Red House Site (11 St 162): A Small 19th Century Euro-American Farmstead.
Joseph S. Phillippe. Midwestern Archeological Research Center.
- 2:30 Rock Island Arsenal: A Military Industrial Complex on the Mississippi: An Archeological, Historical and Architectural Overview.
Frederick W. Lange, Titus M. Karlowicz, Henry Moy. Archeological Research Center.
- 2:45 New Insights into Glass Container Classifications.
Ronald W. Deiss. Illinois State University.
- 3:00 Discussion
- 3:10 - 3:20 BREAK
- 3:20 - 5:00 pm. VOLUNTEER PAPERS SESSION III (Room 154)
- 3:20 Modoc Rock Shelter Chronology
Melvin Fowler. University of Wisconsin-Milwaukee.
- 3:30 Subsistence Shifts at Modoc Rock Shelter.
Bonnie Styles and Frances B. King. Illinois State Museum.
- 3:40 Models of Agricultural and Cultural Development: The Upper Midwest.
Robert F. Sasso. Northwestern University.
- 3:50 Climatic Significance of Rice Rat (*Oryzomys palustris*) Remains in the Midwest.
Kent D. Vickery, University of Cincinnati; James L. Theler, University of Wisconsin-Madison; Orrin C. Shane III, The Science Museum of Minnesota.
- 4:00 Discussion Break
- 4:10 Modeling Prehistoric Population Density using Projectile Point Data.
Stephen Lensink. University of Iowa-Iowa City.
- 4:20 Site Distribution in the Prairie Peninsula of Northern Illinois: Prehistoric Adaptations to the Forest Edge.
James Warren Springer. Northern Illinois University.
- 4:30 The Upland Lithic Scatter: Unorganized Masses or Substantive Research Potential? Report from the Goodwine Site 11V83, East Central Illinois.
Richard B. Edging. University of Illinois, Urbana.
- 4:40 "There Once was an Ugly Duckling". The Utilization of Collectors, Pothunters and Amateur Archeologists.
D. Clay Dillingham. University of Cincinnati.
- 4:50 Discussion
- 5:00 Adjournment

SESSION B Room 16

- 1:30 - 2:55 THE EARLY WOODLAND STAGE
James B. Stoltman. University of Wisconsin-Madison.
- 1:30 The Florence Street Complex and the Early Woodland Tradition in the American Bottom.
Thomas E. Emerson. University of Illinois, Urbana.
- 1:45 The Bushmeyer Site Ceramics: A Closer Look at Liverpool Ware.
David Morgan. Foundation for Illinois Archaeology.
- 2:00 Marion Phase, Black Sand, and the Havana Tradition: Their Relationships?
Patrick Munson. Indiana University.
- 2:15 The Lake Farms Project and the Early Woodland Period in the Four Lakes Area of Southern Wisconsin.
Philip Salkin. Archaeological Consulting and Services.
- 2:30 The Prairie Phase, an "Early Woodland" Manifestation in the Upper Mississippi River Valley. James B. Stoltman, James L. Theler, Robert F. Boszhardt, University of Wisconsin-Madison.
- 2:45 Discussion
- 2:55 - 3:10 BREAK
- 3:10 - 5:00 SETTLEMENT C AT THE ORENDORF SITE: REPORTS ON ONGOING ANALYSES
Lawrence Conrad. Western Illinois University.
- 3:10 Introduction
- 3:20 The Changing Community Plan of Settlement C at the Orendorf Site.
Sharon K. Santure. Western Illinois University.
- 3:35 Preliminary Observations on the Ceramic Assemblage from Orendorf Settlement C.
Lawrence Conrad. Western Illinois University.
- 3:50 The Study of Human Activities using Burned Structure Floor Assemblages: Examples from Mississippian Sites in Illinois and Missouri.
Philip A. Perazio. New York University, NY.
- 4:05 Comments on the Cordage and Textiles at Settlement C at the Orendorf Site Based on Ceramic Impressions.
Susan Jelly. University of Illinois, Chicago Circle
- 4:20 Corn from the Orendorf Site.
Leonard W. Blake. Washington University.
- 4:35 Preliminary Report on Faunal Remains from the Orendorf Site-
Thomas Emerson, University of Illinois, Urbana. Janet Speth, University of Wisconsin-Madison.

4:50 Discussion

5:00 Adjournment

SATURDAY EVENING OCTOBER 17

5:30 - 8:00 pm Cocktail Party at the Friedrich Center

SUNDAY MORNING OCTOBER 18

SESSION A Room 16

- 9:00 am - 1:00 pm NEW DEVELOPMENTS IN THE CULTURAL HISTORY OF THE AMERICAN BOTTOM
Thomas Emerson. University of Illinois, Urbana.
- 9:00 Introductory Remarks on Past Research and Role of the FAI-270 Project
in American Bottom Archaeology
- 9:15 ARCHAIC PAPERS:
The Late Archaic in the American Bottom: The Falling Springs and Titterington
Complexes.
Dale L. McElrath and Andrew Fortier. University of Illinois, Urbana.
- 9:30 An Overview of the Terminal Archaic Prairie Lake Complex.
Thomas Emerson and Dale McElrath. University of Illinois, Urbana.
- 9:45 WOODLAND PAPERS
An Overview of the Early and Middle Woodland Occupation of the American Bottom
Andrew Fortier. University of Illinois, Urbana.
- 10:00 Petrographic Analysis of Marion Thick Pottery.
James W. Porter. University of Illinois, Urbana.
- 10:15 Variability in Early Bluff Culture in the American Bottom Region.
John E. Kelly. University of Illinois, Urbana.
- 10:35 - 10:50 BREAK. Coffee and donuts available in the lobby.
- 10:50 Elevated Burial Platforms
Warren L. Wittry. University of Illinois, Urbana.
- 11:05 Variability in Late Bluff Culture in the American Bottom Region
John E. Kelly. University of Illinois, Urbana.
- 11:35 MISSISSIPPIAN PAPERS
The Mississippian Occupation of the American Bottom: The Farmsteads.
George Milner and Thomas Emerson. University of Illinois, Urbana.
- 11:50 The Mississippian Occupation of the American Bottom: The Communities.
Thomas Emerson and George Milner. University of Illinois, Urbana.

12:05 The Health Status of the American Bottom Peoples During the Mississippian Period.
George Milner. University of Illinois, Urbana.

12:20 SUBSISTENCE STUDIES
The Status of Faunal Analysis in the American Bottom.
Lucretia Kelly, University of Illinois, Urbana.

12:35 Paleoethnobotanical Investigations in the American Bottom: Late Archaic
through Mississippian Periods.
Sissel Johannessen. University of Illinois, Urbana.

12:55 ADJOURN

SESSION B Room 154

9:00 - 10:30 am IMPACTS OF NAVIGATION ON ARCHAEOLOGICAL RESOURCES IN THE UPPER
MISSISSIPPI RIVER SYSTEM
Stan Riggle. Iowa State Historical Department

Assessing Navigation-Related Impacts on Cultural Resources of the Upper
Mississippi River System.
James Gramann. University of Wisconsin-Madison.

Survey Planning in the Upper Mississippi River: Defining the Data Base.
Roy Eichhorn. U.S. Army Corps of Engineers, Rock Island.

The Mortland Island Site: An Early Late Woodland Site Impacted by Cutbank Erosion
Ann Koski. Eastern Illinois University, Charleston.

Preliminary Report on an Archaeological Survey of Pool 12, Upper Mississippi
River.
Robert F. Boszhardt. Great Lakes Archaeological Research Center.

Comments on Erosion and Archaeological Site Distribution in the Prairie
du Chien Area of Pool 10.
James L. Theler. University of Wisconsin-Madison.

Additional Participants:
Edward Jelks, Illinois State University.

10:30 - 10:50 BREAK. Coffee and donuts available in lobby.

10:50 - 12:20 IS THERE A FUTURE FOR THE PAST? THE FEDERAL AND STATE PROGRAMS IN
ARCHAEOLOGY.

Elizabeth Benchley, University of Wisconsin-Milwaukee;
John Forde, University of Wisconsin Center-Marathon.

PANEL DISCUSSION - ADDITIONAL PARTICIPANTS:

William Green, State Historical Society of Wisconsin
John Wackman, Great Lakes Archaeological Research Center
Judy Propper, USDA Forest Service
Roy Reaves, IAS
Terry Norris, St. Louis Corps of Engineers

1:00 BUSINESS MEETING: WHO WILL HOST THE 1982 MEETINGS?

1:10 ADJOURNMENT OF CONFERENCE

1981 MIDWESTERN ARCHAEOLOGICAL CONFERENCE

<u>Author</u>	<u>Affiliation</u>	<u>Title</u>	<u>Session</u>
Blake, Leonard W.	Washington University	Corn From the Orendorf Site	Orendorf
		The trend through time in the Middle Mississippi Valley was from ears with small cobs and 12 to 14 rows of elongated grains toward larger cobs with 8 to 10 rows of crescent-shaped grains. Corn from Orendorf contains elements of both of these races and intermediates. Although elements of the large-cobbed race predominate, they are not of the extreme form later present in the area. Comparisons will be made with corn from other midwestern sites, which are earlier, later, and of about the same time period.	
Conrad, Lawrence A.	Western Illinois University	Preliminary Observations on the Ceramic Assemblage from Orendorf Settlement C	Orendorf
		Though plain jars make up most of the ceramic assemblage from Orendorf Settlement C, the considerable variety in vessel, rim and handle form suggests a rather detailed ceramic chronology may be possible. The range of indigenous vessel forms and decorations will be briefly discussed along with trade sherds.	
Cowan, C. Wesley; Bruce W. Aument, Lisa J. Klempay, Leonard R. Piotrowski	Ohio State University	Variation in Hopewell Settlement Pattern and Lithic Industries in the Vicinity of the Newark Earthworks: Some Preliminary Observations	Volunteer I
		Initial results of survey and analysis of Middle Woodland cultural materials in the Raccoon Creek drainage of Licking County, Ohio are reported. At least two non-mound Hopewell site types are suggested by these data: habitation sites, and specialized lithic reduction locales. Variation in material content between these sites is discussed.	
Deiss, Ronald W.	Illinois State University-	New Insights into Glass Container Classifications	Historic
	Normal	The preponderance of glass bottles and fragments on historic sites signifies that the analysis of glass is important to the interpretive process. In the past, analysis has not provided the consistency and statistical actuality required for a sound interpretive framework. Through stylistic changes and manufacturing innovations, the glass industry attempted to compete more easily and successfully with foreign and domestic markets. To meet the demands of 19th century American consumers, product improvement fostered new manufacturing techniques, such as in molding and finishing. If documented, manufacturing and stylistic trends add insights into the history and development of the glass industry and provide an interpretive framework for dating, as well as contextual analysis. Archeological and documentary research complements the contextual interpretation and refines the classification by testing attribute reliability through comparative study. Glass which is undefined as to type or brand is then defined by attributes which can be dated. Thus, classifications which include this analysis also provides an internally consistent procedure for examining specimens for which function and brand are not known. In use by Illinois State University Historic Sites Division classifications which emphasize these dateable attributes have contributed to the interpretation of historic period cultural remains in the Midwest	
Dillingham, D. Clay	University of Cincinnati	"There Once Was an Ugly Duckling" - The Utilization of Collectors, Pot-hunters, and Amateur Archeologists	Vol. III
		The archeologist has done himself a great disfavor by ignoring the vast sources of potential information that can be gleaned from collectors, pot-hunters, and amateur archeologists. For the first time these lumped stereotypes are recognized as separate and distinct groups which are then clearly defined. Their separate potentials are explored with the possibilities and problems of their utilization discussed. Their potential for positive contributions to the field of archeology is emphasized as their reputation for destruction and irresponsibility is already deeply embedded in the discipline's literature. For example, the problems of establishing acceptable provenience and credibility for these groups and their material are considered. A workable methodology is presented for establishing contact and rapport without encouraging destruction, exploitation, and loss of valuable information by these often untrained groups.	
Edging, Richard B.	University of Illinois-Urbana	The Upland Lithic Scatter: Unorganized Masses or Substantive Research Potential? Report from the Goodwine Site IIV83, East Central Illinois	Vol. III
		The Goodwine site, IIV83, is situated within the proposed relocation of County Highway 15 over Bean Creek, near the Middlefork of the Vermilion River in East-Central Illinois. Initial survey-testing data suggested that the site was a large, shallow, relatively undisturbed lithic scatter along the forested bluff edge and uplands overlooking Bean Creek. The site was investigated with a research design exploring the potential for defining subsurface features, activity areas and tool/debris concentrations - manifestations normally disturbed by modern cultivation. The research design and strategy stressed the role of short duration occupations within a seasonal round.	
Eichhorn, Roy	U.S. Army Corps of Engineers-Rock Island	Survey Planning in the Upper Mississippi River: defining the data base.	River Navigation
		This paper describes the rationale being employed by the Coprs of Engineers, Rock Island District, for identifying archaeological resources on land acquired for the 9 foot channel navigation project, Mississippi River. The section of the river that Rock Island is responsible for extends approximately 315 river miles from	

Guttenberg, Iowa to Saverton, Missouri. While a fair amount is known about the area through 'collector folklore' and there are assumptions about site density, settlement patterns, and erosional problems for this area held by the professional community, very little empirical data exists that applies to the system as a whole. Thus, the first task facing the land managing agencies on the Mississippi River is to define the data base. What follows is a description of the process being used with a discussion of what techniques are being employed and why.

- Emerson, Thomas E. University of Illinois-Urbana The Florence Street Complex and the Early Woodland Tradition in the American Bottom Early Woodland
FAI-270 excavations at the Florence Street site (11-S-458) in the American Bottom of Illinois revealed the presence of a heretofore unrecognized Early Woodland complex. This complex is characterized by grog-tempered, fingernail decorated ceramics, contracting stemmed projectile points, large stone-filled hearths, and small conical processing pits. Typological associations and radiocarbon assays indicate a time range of from 500-300 BC for this complex.
- Emerson, Thomas E. and Dale L. McElrath University of Illinois-Urbana An Overview of the Terminal Archaic Prairie Lake Complex American Bottom
Recent investigations at the Dyroff (11-S-463), Levin (11-S-462), and Missouri Pacific #2 (11-S-46) sites in the Prairie Lake Locality of the American Bottom resulted in the excavation of over 1200 Late Archaic features. Based on C14 dates and projectile point styles these Terminal Archaic components have been associated with the Prairie Lake Complex which dates from 1000 to 500 B.C. Analysis of the recovered artifact assemblage indicates the occupations were multifunctional and included the performance of extractive, maintenance, and social tasks. Based on the spatial distribution of features it was possible to recognize a number of small activity areas possibly representing single family groups. The Prairie Lake locality is defined as a base locale which may have been inhabited by discrete family groups on a fairly permanent basis. A settlement system is postulated which consists of a permanent base locale operating in conjunction with a series of specialized extractive camps utilized on a seasonal basis.
- Emerson, Thomas E. and George R. Milner University of Illinois-Urbana The Mississippian Occupation of the American Bottom: The Communities. American Bottom
Recent excavations in the American Bottom by the FAI-270 Project have revealed large numbers of Mississippian structures and associated features from what would be considered "fourth-line communities." Given this new data it is now possible to recognize functionally distinct units such as farmsteads, communal structures, and mortuary/charnel houses within the category of fourth-line communities. It is contended that such entities are integrated into dispersed village communities which represent the basic social/political/religious unit in the Mississippian settlement pattern. The integration of such villages at both the local and regional level is discussed.
- Emerson, Thomas and Janet M. Speth University of Illinois-Urbana Preliminary Report on Faunal Remains from the University of Wisconsin-Madison Orendorf Site Orendorf
A preliminary discussion of the results of faunal analyses of the Orendorf Site is offered. Large mammals, birds, and fish are treated, with attention to habitats utilized by the people of Orendorf, seasonality of procurement, and dietary contributions of the various faunal groups. Comparison with previous Middle Mississippian research is made.
- Earey, Mark E. University of Illinois-Urbana Summary and Comparison of Seven Historic Sites Affected by the FAI-270 in the American Bottom Region of Southwestern Illinois Historic
The seven best preserved historic sites affected by construction of the proposed FAI-270 in the American Bottom Region and adjacent bluffs of Southwestern Illinois will be briefly summarized. Three of them (Jessee Lindall, Pittsburg, and Twiss Hill) were associated with coal mining in the early and mid nineteenth century. The other four sites (Alorton, Drews, Droit, and Turner) were farmsteads during the mid to late nineteenth century. None of these sites falls within the prevalent tradition of studying people or locations of obvious individual political, social, or economic importance. Comparisons between the sites will be based upon settlement patterns, site activities, land owning patterns, ceramic prices, personal property values, environment, types and functions of features present, and the use of specific artifacts in the context of the sites' function.
- Essenpreis, Patricia S. Loyola University of Chicago An Attribute Analysis of Ceramics from the Anderson Village Site, Southwestern Ohio Vol. I
Analysis of ceramics from one component of the Anderson Village Site, and American phase village of the Fort Ancient Tradition, revealed differences in the degree of attribute clustering for ceramics of different temper types. In particular, shell-only tempered vessels demonstrated tight association of a large number of attributes (rim thickening, lip form, surface treatment of rim and neck areas, decoration presence and motif, and type of handle). In contrast, much greater variation was exhibited in the attribute combinations present on grit and grit and shell combined ceramics. These differences have not been stated explicitly in the analysis of Fort Ancient by Griffin (1943) but are reflected in his observation that the shell tempered pottery from the Anderson Village and Taylor Mound and Village sites bore close resemblance to ceramics from the Madisonville and Sand Ridge Sites to the south. cursory examination of the available literature suggests that the similarities between shell-only tempered ceramics from Sand Ridge, Madisonville (domestic ware only), State Line, Anderson Village, and Taylor Mound and Village are indeed strong, and support their inclusion within one ceramic type. In contrast, the grit and grit and shell tempered ceramics demonstrate much greater regional diversity. This disparity inevitably leads to considerations of cultural interactions both within the Anderson phase and between Anderson and Madisonville phase sites in southwestern Ohio.

- Fortier, Andrew University of Illinois-Urbana An Overview of the Early and Middle Woodland Occupation of the American Bottom American Bottom
- During the past three years, excavations conducted by the FAI-270 Archaeological Mitigation Project have revealed a significant amount of new data concerning the Early and Middle Woodland occupation of the American Bottom. This report represents an overview of the present data base, especially that information which bears on questions regarding the settlement, subsistence and technological systems of cultural groups characterizing each broad time period in this region. The inner channel environments of the American Bottom comprised the primary settlement foci for Early and Middle Woodland groups from 500 B.C. to A.C. 300. As a result, their subsistence systems were structured primarily around the extraction of aquatic resources associated with floodplain marshes, lakes, and sloughs. Extra-regional associations are also discussed, and it is concluded that the American Bottom represented somewhat of a melting-pot during both time periods with primary influences emanating from the south.
- Gramann, James H. University of Wisconsin-Madison Assessing Navigation-Related Impacts on Cultural Resources of the Upper Mississippi River System River Navigation
- As part of the development of a comprehensive master plan for the management of the Upper Mississippi River System (UMRS), a study was designed to assess the system-wide impacts of commercial and recreational activity on cultural resources of the river system. This study contained two components. The first component consisted of a workshop attended by cultural resource management professionals and university archeologists and historians who have worked extensively on the UMRS. The purpose of the workshop was to use specific examples to construct generalizations concerning the types of impacts affecting different kinds of sites and the major navigation-related sources of these impacts. These sources included commercial barge traffic, pool level fluctuation, recreational use, barge terminals and fleeting areas, channel dredging, and structural navigation aids such as wing dams and levees. The principal types of impacts found to be associated with these navigation-related activities were shoreline erosion, vandalism, burial of sites beneath river sediments, inundation, burial of sites under dredge material, and ground disturbance. The second component of the study consisted of a survey of persons managing or providing recreation-related resources on the UMRS. The survey was administered over the entire river system. Respondents were asked to assess the severity of current impacts on cultural resources under their management, and to evaluate future impacts given a 50 percent increase in commercial barge traffic on their segment of the river. As did the workshop participants, managers and providers believed that shoreline erosion was a major threat to cultural resources which would increase in severity with increased barge traffic. Contrary to the assessment of professional archeologists and historians, vandalism was perceived to be only a minor threat to cultural resources on the river. The implications of these findings for mitigating current and future impacts are discussed.
- Gundersen, James Novotny Wichita State University Pipestones of Kansas Archaeometry
- Many years ago Waldo Wedel recognized that most of the pipestones of Kansas sites were made of a raw material somehow 'different' from Catlinite (by definition, pipestone from the Minnesota type locality). He informally referred to this raw material as 'Kansas pipestone' (KSPS). X-ray diffraction analysis (XRD) of several hundred pipes, pipe fragments, pipe blanks, worked slabs or carvings recovered in Kansas have revealed that there is a distinctive Kansas pipestone of remarkably consistent mineralogical composition. The most abundant variety of KSPS (about 90%) consists of very abundant clay-sized quartz, abundant pyrophyllite, and subordinate hematite. The remaining KSPS varieties also contain minor or trace amounts of kaolinite and, or muscovite. Only a half-dozen pipes from Kansas were clearly not KSPS types. The field occurrence of KSPS raw material will be discussed. Three of these artifacts from Kansas localities were essentially equivalent to high-quality Catlinite or 'Minnesota pipestone' (MNPS) recently collected from the Monument quarries and recognized in historic pipes; this latter clay-sized material is essentially devoid of any quartz and consists mainly of roughly equal amounts of muscovite and pyrophyllite, and subordinate hematite. The mineralogy of MNPS is quite complex and will be reported elsewhere, with G.B. Morey of the Minnesota Geological Survey. About two hundred quarry and drill hole chip samples have been analyzed to date, and the relative amounts of pyrophyllite and muscovite in MNPS are found to vary widely as does the presence and abundance of hematite, kaolinite and chlorite. A large number of MNPS samples are also characterized by the presence of diaspor. Three artifacts from Kansas localities are diaspor-bearing. On the basis of a very preliminary study, both KSPS and MNPS might be easily distinguishable from Wisconsin pipestone (WSPS), which apparently consists mainly of very abundant clay-sized quartz, abundant kaolinite, and subordinate hematite - with trace amounts of pyrophyllite or muscovite in a few specimens. M.C. Mudrey of the Wisconsin Geological Survey is currently making a systematic collection from WSPS sites for our continuing investigations of all pipestones at the WSU geoarchaeometric facility. Active interaction with archaeologists concerned with pipestone distribution is being sought.
- Hawkins, Rebecca University of Cincinnati Flaked Cobble "Scraper Planes" From Southwestern Ohio: Description of a New Late Archaic Tool Type Vol. II
- Flaked glacial cobbles recently excavated in Late Archaic context in the lower Miami River drainage of Southwestern Ohio appear similar in shape to chert scraper planes found in certain Midwestern Paleo Indian sites. Morphological and metric characteristics are described; probable method of manufacture is discussed and possible functions are inferred from use-wear analysis.

- Hewitt, John S. Northwestern University The Status of Archaeological Estimates of Mortality Vol. II
 The distribution of deaths within age categories in a population, when accurately established, can be a sensitive indicator of the stresses imposed upon a population by its circumstances. Students of extant populations often use convenient shortcut methods to estimate the effects of mortality upon a group of even-aged individuals through time, based on information gathered at a single point in time. The use of such methods in archaeology is not a convenience, but a necessity, since we cannot directly observe our subjects. Estimates based upon these methods are accurate only if the population of interest remained constant both in total size and in the proportion of individuals in each age group from one time interval to the next (a "stationary" population). If this was not the case, then estimates of mortality from skeletal remains may be inaccurate or misleading. There are good reasons to believe that natural populations are often not stationary, although they are seldom considered by palaeodemographers, and after discussing some of these reasons I will illustrate the possible effects of variation in population size through time on burial population structure by simulations based on ethnographic information. It will be shown that the most sensitive indicators of variation in population growth rate are the proportions of very young individuals in burial populations--which proportions are also the most likely to be obscured by differential burial practices and differential preservation of skeletal material.
- Hurley, William M. and University of Toronto Recent Research on the Effigy Mound Tradition Vol. I
 Gary W. Crawford In the past few decades Midwestern Archaeologists have speculated that the peoples of the Effigy Mound Tradition were solely hunters and gatherers. This view was based on data recovered from excavations which primarily focused on mound excavations with the notable exceptions of work on caves in Wisconsin and Iowa. However, any statement on plant husbandry was negated by the absence of visible charred corn cobs and the lack of flotation and palaeoethnobotanical studies. In 1966 we floated some 15 tons of soil which are now being processed. The plant remains are comprised of the residue from nearly 1500 liters of soil, mainly from the Sonders site (47-Wp-26). The 34 samples are from pits and houses found in the village area. To date, only the sample portions down to 2 mm. in size have been examined but acorn shell and meat, hickory nut shell and one maize cupule and two kernel fragments have been identified. The maize, of indeterminable type, is from a Sonders feature dated at (WIS-219) A.D. 890-910± 65 (MASCA). This is the earliest maize recovered so far from Wisconsin. Maize seems to have been insignificant to the 9th Century A.D. diet at Sonders; however, the flotation samples, thus far, are characterized in general by a lack of possible plant food remains.
- Jackson, Douglas K. University of Illinois-Urbana The Fairmount Occupation at the BBB Motor Site Vol. I
 The BBB Motor Site is a small multicomponent site located in the American Bottom 3.5 km northeast of Monk's Mound and the Cahokia site. This paper will focus on the Fairmount component. Excavations at the BBB Motor site have revealed the presence of a small Fairmount hamlet. The sharply circumscribed settlement was comprised of 148 features, including sixteen structures. A wide range of structure sizes were present and are interpreted as representing both habitign and storage functions for the structures. Defined within the community were three cluster units of structures and pits believed to represent family or other kin related groups. Through the analysis of pottery styles, temper percentages and four C14 dates, this site is temporally placed within the middle of the Fairmount Phase (950-1000 AC). Although portions of the site may have been destroyed by previous highway construction on the southern edge, it is felt that a significant portion of a Fairmount community is represented by the archaeological data. Fairmount settlement patterns in this locale as well as relationships to the Cahokia site and other areas of the American Bottom are also discussed.
- Janssen, William A. Northern Illinois University-DeKalb Prehistoric Trade and Culture Contact: Vol. I
 The Apple River, Northwestern Illinois
 During the summer of 1979, seven students and the director of the Northern Illinois University Field School, Dr. James W. Springer, conducted excavations and surface reconnaissance along the Apple River drainage in Jo Daviess County, Illinois. Extensive lithic and limited ceramic cultural materials showed that an area within two miles of the mouth of the river has been intermittently occupied since the early Holocene. This report focuses upon the nature of incipient trading associations during the Late Archaic, and the later effects of culture contact on local technologies during the Late Woodland. It is known that lead ore from this area was traded to places as distant as southern Ontario and northern Alabama during the transition out of the late Archaic, and has been found preserved in burial contexts in these areas. Evidence from the Apple River will assist in the determination of the non-local cultures responsible for the witnessed long distance trade through assessment of the diagnostic lithics discovered there. Then, the effects of subsequent partial acculturation on the essentially conservative local cultures will be analyzed from a lithic manufacturing stylistic approach which examines a distinctive Late Woodland blade tool industry discovered during excavations. Certain characteristics of the industry appear to have been borrowed from the technologically superior Hopewell and/or Weaver (e.g. Albany Mounds) occupants of the Upper Mississippi Valley. Therefore, the report focuses upon the events leading up to, and subsequent to, the occupation of the area by acculturating dominants whose purpose involved trade in (at least) lead ore.

Jelly, Susan	University of Illinois - Chicago Circle	Comments on the Cordage and Textiles at Settlement C at the Orendorf Site Based on Ceramic Impressions	Orendorf
	The cord and fabric impressions from the Spoon River ceramics from Settlement C will be discussed along with the limitations of the sample.		
Johannessen, Sissel	University of Illinois-Urbana	Paleoethnobotanical Investigations in the American Bottom: Late Archaic through Mississippian Periods	American Bottom
	This paper reports on the present state of analysis of the floral material from the FAI-270 Project excavations near St. Louis. More than 3000 samples have been analyzed from 30 sites, which range in time from the Titterington phase of the Late Archaic through late Mississippian periods. The focus of this synthesis is the temporal and spatial variation in the pattern of plant remains.		
Kelly, John E.	University of Illinois-Urbana	Variability in Early Bluff Culture in the American Bottom Region	American Bottom
	As a result of recent investigations particularly those associated with the FAI-270 Project, a better understanding has been attained of the Late Woodland, Early Bluff Culture. This presentation will examine the temporal variability in settlement subsistence aspects of Early Bluff Culture, and their implications for the development of Mississippian Culture in the American Bottom region.		
Kelly, John E.	University of Illinois-Urbana	Variability in Late Bluff Culture in the American Bottom Region	American Bottom
	Late Bluff Culture in the American Bottom represent the emergent level of development for Mississippian Culture in the American Bottom region. This presentation will discuss recent investigations particularly those associated with the FAI-270 Project of Late Bluff sites. The focus of this discussion will be on the variability in Late Bluff settlement subsistence patterns and the economic implications for understanding Cahokia's development.		
Kelly, Lucretia	University of Illinois-Urbana	The Status of Faunal Analysis in the American Bottom	American Bottom
	While large quantities of animal bones have been identified from sites in the American Bottom, and in particular Cahokia, little work has been done to gain an understanding of faunal exploitation by aboriginal populations for the area. Recent faunal research at Cahokia and current research from the FAI-270 sites will be examined with emphasis on Late Woodland and Mississippian. While a definitive model(s) for exploitative patterns can not yet be put forth for the region, data from these cultures can be compared to the adjacent regions of the lower Illinois River Valley and Lower Mississippi Valley for which faunal exploitation models do exist. Parallels and differences will be discussed.		
Koski, Ann L.	Eastern Illinois University, Charleston	The Mortland Island Site: An Early Late Woodland Site Impacted by Cutbank Erosion	River Navigation
	The Mortland Island site is an early Late Woodland site located on an island in the Illinois River south of Hardin, Illinois. Dating to approximately A.D. 400-900, the site is currently being destroyed by cutbank erosion which is cutting laterally into the island's interior. The steep erosional cutbank that has developed along the island's eastern perimeter has exposed prehistoric pit features and midden and deposited thousands of pieces of cultural debris along the beach (primarily pottery sherds, stone tools and chipping debris). The site has been protected from the effects of deflation or other surface erosion, however, due to the fact that 50 cm or more of alluvium have been deposited on the island's surface within the last 100 years as the result of river flooding. The island is currently owned and managed by the U.S. Army Corps of Engineers. With support of the St. Louis District Corps of Engineers, archeological field investigations were conducted at the Mortland Island site by the Foundation for Illinois Archeology (FIA) in 1978 and 1979 to determine the site's horizontal extent, depth, internal structural complexity, the effects of erosion, the prehistoric period(s) of occupation, and the quality of preservation of fragile prehistoric cultural remains. The Mortland Island site was predominately a White Hall phase camp. Occupied seasonally, the people transported plant foods to the shoreline and engaged in woodworking, hunting, butchering and hide preparation tasks along the island's natural levee. This is the only known White Hall phase island site among the 113 early Late Woodland sites located in the lower Illinois Valley region. It is, in fact, the only known prehistoric island site in the region to date. Rip-rapping procedures have been recommended to preserve the remaining portions of the site since erosion is actively destroying what remains of the central area of the site (which contains the majority of the structurally intact midden and features).		
Lange, Frederick W., Titus M. Karłowicz, Henry Moy	Illinois State University-Urbana	Rock Island Arsenal: A Military Industrial Complex on the Mississippi: An Archeological, Historical, and Architectural Overview	Historic
	During the 19th century, the Rock Island Arsenal emerged as a major military complex with both industrial and residential components. These features were striking for their Midwestern context at the time, and were carefully planned and elegantly executed. Subsequent military industrial development, as well as residential and recreational use of the island, has had an impact on the archeological resources and resource preservation. Research methodologies had to be tailored to both the military function of the island and to the island setting itself. The nature of documentation available for the island is also discussed, and it is placed in its local, developmental historical setting.		

- Leigh, Steven R. University of Tennessee-Knoxville The Elizabeth Site: A Middle Archaic and Middle Woodland Site in Westcentral Illinois Vol. I
The Elizabeth Site, in West-central Illinois, is a complex, multi-component Middle Archaic and Middle Woodland habitation and mortuary site. Excavation this summer centered on an *in situ* Middle Archaic site, located beneath a large Middle Woodland mound. Excavation of a Middle Woodland cemetery adjacent to the main portion of the site also provided significant information.
- Lensink, Stephen C. University of Iowa-Iowa City Modeling Prehistoric Population Density Using Projectile Point Data Vol. III
Projectile points from amateur collections in the prairie lakes area of north-central Iowa are used to estimate the size of the prehistoric populations exploiting the marsh habitat from the beginning of the Holocene to the present. Temporal changes in point popularity are modeled with a variety of normal and uniform probability distributions to generate regional population utilization curves. Population trends indicate a gradual increase through the Middle Archaic, a slight decline in the Late Archaic/Early Woodland, a dramatic increase during Middle and Late Woodland times and a correspondingly large depopulation in the Late Prehistoric period. Correlation with environmental changes in the prairie peninsula appear to account for some of these population trends.
- Lindner, Christopher University of Cincinnati Lower Scioto and Adjacent Ohio Valley Ironstone Artifacts as Digging Tools Vol. II
"Hoes" of ferruginous sandstone have been treated as diagnostic both of Adena and Ft. Ancient cultures. These interpretations are evaluated in light of the fact that surface associations of numerous examples from the floodplain suggest a Late Archaic affiliation. This paper presents their morphology/measurements and discusses their use-wear striations and smoothing. Replicative experiments, ethnographic analogy, and information on functionally similar prehistoric implements offer further clues about utilization, chronology, and ecological significance. (M.A. thesis work)
- Mansberger, Floyd Illinois State University Historical Archeology and the Early Domestic Architecture of Illinois Historic
The objective of this paper is to illustrate the interpretative value of above-ground architectural remains to Historical Archeology. Gaps or inaccuracies within the historical record can be corrected through archeological research. Few primary documents pertaining to the early Anglo-American domestic architecture of Illinois exist. Relevant historical records are not always available, and if available, represent more of a perceived ideal than a field reality. The F.A.P. 408 survey represented an excellent opportunity to compare the extant 19th century houses of west-central Illinois to the documented houses for the same region. This comparison demonstrated that the houses illustrated in the atlas do not represent a random sample of houses present on the cultural landscape but represent a very select group of structures. The most common farm scene illustrated in the atlas contained an I-house with a back kitchen extension and a New England Type barn; the most common 19th century house found during the survey was the small I-cottage. Historical Archeology can correct many of the inaccuracies and biases within the documentary record and result in a better understanding of the lifeways associated with 19th century Illinois.
- McElrath, Dale and Andrew Fortier University of Illinois-Urbana The Late Archaic in the American Bottom: The Falling Springs and Titterington Complexes American Bottom
This paper will focus on the analysis and interpretive results of the first sites in the American Bottom area to yield substantial subsurface remains representative of the Falling Springs Complex (the McLean site 11-S-640) and the Titterington Complex (the Go-Kart North site 11-Mo-552N). Summary comments on the nature of the Late Archaic in the American Bottom will be followed by brief illustrations of the materials recovered and by a discussion of the analysis performed. Parallels will be drawn between the Falling Springs Complex and the Helton phase materials from the Lower Illinois Valley; and between the Titterington Complex and other documented Titterington assemblages throughout the Midwest. Conclusions will be drawn concerning the nature of the early Late Archaic social structure and settlement pattern/system in the American Bottom area.
- Milner, George R. University of Illinois-Urbana The Health Status of American Bottom Peoples During the Mississippian Period American Bottom
Health can be considered a continuous, but fluctuating, property determined by complex interactions between the host, the natural environment, and the cultural environment. This paper reviews the health status of Mississippian peoples in the American Bottom in terms of the relationships between disease processes and the prehistoric environment, specifically data pertaining to settlement patterns and subsistence strategies. Integrating data derived from both habitation sites and skeletal series permits the development of more comprehensive descriptions of health status. The implications of this research for studies of prehistoric health that are conducted elsewhere in eastern North America are also discussed.
- Milner, George R. and Thomas E. Emerson University of Illinois-Urbana The Mississippian Occupation of the American Bottom: The Farmsteads American Bottom
Archaeological investigations conducted by the FAI-270 Archaeological Project have included the excavation of hundreds of Mississippian features in the American Bottom. This paper summarizes recently collected data that pertains to the Mississippian occupation of the small, spatially discrete, and isolated settlements, which are frequently termed "farmsteads". The spatial organization of the small Mississippian settlements and the nature of Late prehistoric adaptation to

bottomland point bar environments are emphasized; that information represents refinements to existing knowledge about the small Mississippian settlements in the American Bottom. The integration of farmsteads into more inclusive social and residence units, the communities, is briefly described.

- Morgan, David Foundation for Illinois Archaeology The Bushmeyer Site Ceramics: A Closer Look at Liverpool Ware Early Woodland
- Late Early Woodland ceramics from West-Central Illinois traditionally referred to as Liverpool Ware (Fowler, 1955) have been described and illustrated several times in the literature beginning with the work of Cole and Deuel in the 1930's. In each of these cases, descriptions have been based upon a rather small number of sherds, restricting both quantitative assessment of variation within the ware. Recently, a large collection of Liverpool ceramics was recovered during survey and testing phase activities at a site in the Mississippi Valley directly adjacent to the Lower Illinois Valley region. Due to this large sample of ceramics, it is possible to comment and expand upon many of the observations presented in previous studies, as well as provide several additional insights into the nature of this ware. These issues will provide the basis for this paper.
- Munson, Patrick J. Indiana University Marion Phase, Black Sand, and the Havana Tradition: Their Relationships? Early Woodland
- Although Marion Phase, Black Sand, and Havana Tradition materials have never been found in a single stratigraphic sequence, it has been commonly assumed by most Midwestern archaeologists that Marion Phase to Black Sand to initial Havana is a valid chronological sequence. This assumption is challenged on the basis of distributional analysis, the available radiocarbon dates, and seriation of artifactual, settlement, and mortuary attributes.
- Perazio, Philip A. New York University, New York The Study of Human Activities Using Burned Structure Floor Assemblages: Examples From Mississippian Sites in Illinois and Missouri Orendorf
- The collapse of a burning structure will seal an assemblage of artifacts on the floor more or less as they were at the time of abrupt abandonment. Such assemblages may, with certain qualifications, be considered representative of a moment in the life of a household. The floor materials from eight burned structures at the Mississippian Orendorf site are discussed. Interpretations of activities represented are made based on functional and spatial data. Floor assemblages from other Mississippian sites in Illinois and Missouri are then described and compared with those at Orendorf. Possible spatial patterning of sex-related activities are discussed.
- Phillippe, Joseph S. Illinois State University The Red House Site (11-St-162): A Small 19th Century Euro-American Farmstead Historic
- This paper is derived from research designed to interpret a small 19th century Euro-American farmstead in Scott County, Illinois. This was accomplished by the excavation of the site during the summer of 1980 with analysis of the archeological data during the following fall.
- This paper combines the archeological data recovered from the Red House site excavations with historical data garnered from such sources as local, state, and regional histories, census records and plat books, and oral history data. Although no formal oral history was compiled, much was learned from talking to members of the Campbell family, owners of the site for more than a century, when they visited the project during the course of excavations.
- In order to understand the cultural history of the inhabitants of the Red House site it was necessary to combine the diverse data that does exist to portray their past. This research was a combination of archeology, documentary research, and oral history with an ethnohistorical approach which provided an insight into the material culture of a poor rural family in west central Illinois from the 1830s until the end of the occupation in the 20th century.
- Porter, James W. University of Illinois-Urbana Petrographic Analysis of Marion Thick Pottery American Bottom
- A thin section analysis of Marion Thick pottery from the American Bottom and adjacent areas is presented. At least six distinct mud types (plus 3 sub-types) are shown to have been used by these Early Woodland peoples. The mud sources and temper descriptions suggest a heavy utilization of weathered Illinoian till. The presence of a distinctive bloated rock type (melted, glass phase prominent) in three sherds from three different sites (10-12 km apart) represents a unique situation. Grog tempering is limited but definitely present. The unique Marion Thick vessel form (tub-like) appears to have been carried over distances of at least 10 km and utilized by seasonal bands, resembling Archaic life styles.
- Prentice, Guy University of Illinois-Urbana Cottage Industries as Mississippian Economic Phenomena and Their Detection in the Archaeological Record Vol. I
- The possible existence of cottage industries as part of the Mississippian economic system is examined by defining the nature of cottage industries in general and by briefly examining the archaeological data to see if it fits the cottage industry model. The problem of detecting cottage industries in the archaeological record is also discussed.

- Salkin, Philip H. Archaeological Consulting & Services The Lake Farms Project and the Early Woodland Period in the Four Lakes Area of Southern Wis. Early Woodland
- Archaeological constructs such as periods and stages are useful as heuristic devices in presenting cultural patterns over a broad geographical area in a chronological and/or developmental sequence. While such constructs are necessary elements of a basic framework for understanding prehistory, they can also obscure aspects of cultural development on a regional or sub-regional level.
- In the eastern U.S., the concept of the Early Woodland Period is based on a series of artifact classes and types which mirror the innovations and developments assigned to this period. To these are added a number of traits reflecting changes in social and settlement patterns and new patterns of environmental exploitation. While it is recognized that regional developments occurred, it is assumed that many of the new cultural traits had a widespread distribution. It is also assumed that other traits such as changes in settlement pattern and the development of incipient horticulture were also widespread, although this is not often demonstrated.
- In 1979 the author and Carl Hendrickson excavated over 400 sq. meters of DA459, a site located in the Lake Farms Archaeological District of Dane County. This site is one of a complex of 27 prehistoric sites in the district. The site had a small Late Archaic component overlain by a relatively undisturbed component which yielded evidence of what might be considered an Early Woodland occupation. The ceramics recovered, based on established types and concepts would appear to be representative of the early ceramics of south-central Wisconsin. The ceramics were associated with projectile types defined in Wisconsin as being Early Woodland in age. However, comparisons of the materials with those from Illinois, as well as intra-site analysis suggests that this component might be more representative of the early Middle Woodland Period, and that the projectiles are, at best, dubious diagnostics for the Early Woodland.
- Additional research in the archeology of Dane County, and surrounding counties failed to identify much evidence for the presence of Early Woodland sites. Those present were largely defined by small samples of the ceramics and lithics similar to those recovered from DA459, which are now felt to be suspect indications of the Early Woodland. It may be suggested that the concept of the Early Woodland, as usually defined, is relatively meaningless in this part of the state and that such elements as the use of ceramics and contracting stem points are relatively late additions to a Late Archaic complex which was well-rooted in the area and slow to change.
- Santure, Sharron K. Western Illinois University The Changing Community Plan of Settlement C at the Orendorf Site Orendorf
- Structural attributes of orientation, house floor area, and length/width ratio exhibited chronological changes in Settlement C. Orientation proved to be a significant factor leading to the isolation of an earlier community superimposed by the Settlement C town site. A preliminary ceramic analysis revealed only slight changes in attribute frequency between the different community plans, suggesting a short period of occupation.
- Sasso, Robert F. Northwestern University Models of Agricultural and Cultural Development: Vol III The Upper Midwest
- The origins and development of agriculture is an area of research which has interested midwestern archaeologists for a number of years. The Upper Mississippi Valley is a geographic region where the potential and subsistence security for aboriginal agriculture was marginal. Several models of agricultural and cultural development have been proposed for this region to describe or account for changes which took place during the Late Woodland and Mississippian time periods. In this paper I will analyze some of these models and discuss criticisms of them as well. I will also present an alternative model and outline sets of conditions under which we would expect agricultural developments to take place.
- Seaman, Mark F. Kent State University Surface Survey at the Hopewell Site, Ross County, Ohio, and Competing Models of Hopewell Settlement Vol. I
- A controlled archaeological survey of the Hopewell site and vicinity was conducted in order to, 1) document the current preservation status of the various cultural features at the site, and (2) to collect primary data bearing on the pattern of Hopewell settlement associated with the site. It has been alternatively argued that Scioto Valley Hopewell settlement was dominated by nucleated earthwork-and-village complexes (eg Fischer 1974) or vacant ceremonial centers and supporting dispersed hamlets (Prufner 1967). Hopewell "villages" have been reported from within the Hopewell works itself. The present study does not support the position that villages existed within or near the Hopewell works and a dispersed settlement model is posited.
- Smith, Charles R. U.S. Army Corps of Engineers, Rock Island District The Nature of Inter-site and Regional Variability: A Comparative Study in Illinois Historic
- Understanding the nature of inter-site and regional variability and the distribution of behaviorally significant archeological remains via comparative analyses is seminal to the interpretive process. An examination of three project areas in different sections of the state of Illinois, focusing on the interplay between economic and environmental variables, highlights the degree to which comparative studies can increase our understanding of settlement processes for the state as a whole. The three areas to be examined are: 1) East St. Louis (urban, railroad, commercial center); 2) FAP 408 highway corridor (rural river valley); and 3) FAP406 highway corridor (wetland prairie).
- Springer, James W. Northern Illinois University Site Distribution in the Prairie Peninsula of Northern Illinois: Prehistoric Adaptations to the Forest Edge Vol. III
- Intensive surface collecting of the drainage of the South Branch of the Kishwaukee River northern Illinois, has produced 1930 datable hafted stone tools. The distribution of these tools allows us to document changes in the use of the environment over a period of 11,000 years. The results show a drastic change in site distribution between Archaic

and Woodland times, with a population peak in the Early-Middle Woodland Stage (1000 B.C. - 400 AD.) The results are integrated with other studies from Illinois to show the changing role of upland and headwater localities in the prehistoric settlement systems of the Prairie Peninsula.

- Stoltman, James B.;
James L. Theler,
Robert Boszhardt
University of Wisconsin-Madison The Prairie Phase, an "Early Woodland" Early Woodland
Manifestation in the Upper Mississippi River Valley
The Prairie Phase is a typologically Early Woodland manifestation in the Prairie du Chien locality of southwestern Wisconsin and northeastern Iowa, here defined for the first time. Its hallmarks are an intensive riverine adaptation (including the earliest known shell middens in the locality), Black Sand Incised-related pottery, and contracting stemmed projectile points. Radiocarbon dates from 3 sites show an age of from after 100 B.C. to AD 100, indicating contemporaneity with early portions of the Havana Tradition in Illinois. The persistence of this typologically Early Woodland complex beyond the traditionally recognized Early Woodland Period dramatizes once again the importance of the distinction between time units (periods) and form units (stages).
- Styles, Bonnie W.;
Frances B. King
Illinois State Museum Subsistence Shifts at Modoc Rock Shelter Vol. III
Renewed excavations and analyses of waterscreened materials from Modoc Rock Shelter coupled with a new suite of radiocarbon dates permit new interpretations of subsistence shifts at the site. Deposits discussed here range in age from approximately 9000 to 7200 BP encompassing segments of the Early and Middle Archaic Periods. In the deepest Early Archaic strata (18-16) which should date prior to 8900 BP, plant remains are scarce with wood charcoal predominating. Early Archaic strata 15-13 (8900-8700 BP) continue to show low amounts of floral and faunal remains. These strata are characterized by relatively high percentages of nut remains, including black walnut, pecan, and hazelnut although hickory nut predominates. All of these Early Archaic strata (18-13) show relatively high utilization of small mammals compared to large-bodied species and low-level utilization of aquatics. Floral, faunal and light analyses suggest sporadic, short-term occupations during this period.
Younger Early Archaic strata dating between 8700 and 8500 BP (strata upper-13 through 7) still show small amounts of floral and faunal remains again reflecting short-term occupations interspersed with relatively sterile silts. Within this time-span there is evidence for greater utilization of a variety of nuts, including hickory, black walnut and hazelnut. By Stratum 9, around 8100 BP, the last relatively high use of hazelnuts and walnuts is seen while there is evidence for a slight increase in utilization of fish.
The next change comes in Middle Archaic Stratum 6 around 7600 BP when hickory nut becomes the clearly dominant nut taxa; this dominance continues through Stratum 4 until at least 7200 BP. During this same time-span there is evidence for an explosion in the usage of fish, accompanied by a lesser increase in mammals; small mammals still outnumber large ones. The strata reflect more intense longer-term occupations at the site. Similar subsistence shifts are replicated at other Midwestern sites and are linked to changes in environment, culture and demography.
- Tankersley, Ken
University of Cincinnati Physical and Structural Properties of Ceramic Vol. II
Materials Utilized by a Fort Ancient Group
The results of this study indicate that the Fort Ancient people of the Cincinnati area (ca. 875-1275 AD) utilized clays derived from the Kope Formation of Upper Ordovician strata. Raw clay was processed, and firing above 810° C was impossible due to decomposition of the temper. Restriction to temperatures less than 850° C resulted in highly porous pottery which made long term water storage impossible without sealing the pores after firing. Carbon, trapped in the pores of Fort Ancient pottery promoted the sanitary storage of solid food-stuffs.
- Tench, Patricia
University of Cincinnati Salvage Excavation of Todd Mound: A Hopewell Vol. I
Burial Mound in Southwestern Ohio
Results of a salvage excavation of a partially intact Hopewell mound (Todd Mound, 33Bu205) in Butler County, Ohio are presented. Provided is a description of the mound structure, artifactual material, physical characteristics of the mound burials, and evidence of mortuary ritual. This mound is noteworthy in that it yielded one of only about a dozen known Knife River chalcedony ceremonial blades, along with copper earspools and other evidence of "high church" Hopewell artifacts and trade.
- Vickery, Kent D.;
James L. Theler,
Orrin C. Shane, III
University of Cincinnati Climatic Significance of Rice Rat (*Oryzomys* Vol. III
University of Wisconsin-Madison *palustris*) Remains in the Midwest
The Science Museum of Minnesota
Various theories concerning the former presence of *Oryzomys palustris* in the Midwest north of the modern range are summarized and critiqued. *Oryzomys*' range limit for each of four pre-modern culture periods is correlated with modern mean minimum January isotherms in an attempt to quantitatively reconstruct average winter temperatures over a 1200 year span of prehistoric and early historic time.
- Wiant, Michael D.
Charles R. McGimsey
Foundation for Illinois Archeology Obsidian from Middle Woodland Sites in Illinois: Vol. I
New Data from the Napoleon Hollow Site
The discovery of obsidian in Middle Woodland sites in Illinois has been documented and discussed by Griffin (1965), Struever and Houart (1972) and Seaman (1979). In each case the authors have developed conclusions based on a small amount of obsidian from sites scattered over a large region. Recent excavations at the Napoleon Hollow site have recovered over 150 pieces of obsidian from two Middle Woodland components, one of which is dated to AD 110 (1840± 75 BP). Earlier analyses of obsidian will be re-evaluated in terms of this significant amount from a dated context in what appears to be a rather small Middle Woodland encampment.
- Wieggers, Robert P.
University of Missouri-Columbia Sugar Loaf Mound, the Last Mound of the St. Vol. I
Louis Mound Group
Sugar Loaf Mound (23SL9) is a Mississippian Period mound located within the present city boundaries of St. Louis, Missouri. Early nineteenth century maps record the location of Sugar Loaf Mound and later written accounts describe it as a conical platform mound

situated on a bluff overlooking the Mississippi River. A large portion of the Mound is in situ and is associated with the St. Louis Mound Group situated north of the city center. Both Sugar Loaf Mound and the St. Louis Mound Group have received scant attention compared to the neighboring Cahokia Mound Group. This paper describes the present condition and dimensions of Sugar Loaf Mound. Possible development of the aboriginal mound are also explored.

Wittry, Warren L. University of Illinois, Urbana-Champaign Elevated Burial Platforms American
The Holdener Site (11-S-685) was located on the Illinois Bluff of the American Bottom Bottom
This borrow pit site was totally excavated and is dated by ceramics and 14C to the early Late Woodland Period. The site is interpreted as a mortuary containing two unique burial platforms, possibly indicating dual social divisions. The site plan and principles of truss trenches will be elucidated.

Yerkes, Richard W. University of Wisconsin-Madison Microwear, Microdrills, and Mississippian Vol. I
Craft Specialization

Samples of microblades and microdrills from the Powell Mound and the Dunham Tract of the Cahokia site were examined for microwear traces using the 'high power' techniques described by Lawrence Keeley. The results of this study confirmed the interpretations of Mason and Perion(1961), Morse (1974), and others, namely, that microdrills made of chert were used to drill shell, ostensibly to make disc beads.

While some workers such as Sierzchula (1980), have suggested that Mississippian microdrills were used to drill and engrave wood, teeth and green bone, as well as shell, since experiments on modern materials demonstrated that the tools could be used for those tasks; the only microwear polish that could be identified on the Cahokia microdrills was shell polish, indicating that they were functionally specific.

The implications of this study are discussed, particularly whether specialized tools are the hallmark of specialized craft industries at Cahokia.

MINING THE ARCHAEOLOGICAL PAST: THE VALUE AND POTENTIAL OF EXTANT COLLECTIONS Organized by Lynne Goldstein

William Green (Office of State Archaeologist-University of Iowa) ARCHIVAL SOURCES FOR MIDWESTERN ARCHAEOLOGY This paper focuses on the productive use of the unpublished records of early archaeological investigations. Document collections and archives contain an enormous amount of information important for current archaeological research and management. Case studies emphasize the value of archival research in both problem-oriented and CRM work in Iowa and Wisconsin. Biases and the incomplete nature of archival material are noted. Nevertheless, the usable data obtained through archival research generally will repay the effort involved in such work.

William A. Lovis (Michigan State University) "SQUEEZING" YOUR COLLECTION (OR) UPGRADING AN OLDER DATA SET Past collection strategies might not always address the needs of future researchers. Even short time periods may result in changes of problem orientation, analytic techniques, and consequent sample collection. Making the most of existing data therefore becomes a priority for collection use. Judicious use is imperative where analytic techniques may be destructive. Alternative directions of obtaining similar data need to be explored. These problems are addressed through the example of the Fletcher site collection.

Lynne P. Sullivan (New York State Museum) CASHING IN ON THE DATA BANK OR HOW TO HAVE A PROFITABLE RESEARCH EXPERIENCE WITH AN OLD COLLECTION Archaeological collections made using past research paradigms and older field techniques offer challenges for present researchers, both as resources for new interpretations and as stimuli for creative problem-solving. Conducting research projects with older collections often requires similar levels of planning resolutions to data collection problems as does primary data collection (field work). A strategy for conducting research projects with older collections is proposed, using examples from research with WPA-era collections from the Chickamanga Basin in Tennessee.

Bonnie W. Styles and Mary Bade (Illinois State Museum) THE VALUE OF PHOTOGRAPHIC ARCHIVES; EXAMPLES FROM THE UNIVERSITY OF CHICAGO PHOTOGRAPH FILES The University of Chicago photograph file provides a visual illustration of the importance of photographic archives. This collection of 1930-40s vintage photograph albums contains over 8000 images that document the archaeology and prehistoric material culture of Eastern North America. The file includes pictorial surveys of 13 states and several field projects in Illinois. They document renowned archaeologists in the early days of their careers and the excavation techniques of the time.

Jane E. Bulkstra (University of Chicago) and George R. Milner (Pennsylvania State) CARBON ISOTOPE ANALYSIS AND DIETARY INFERENCES IN THE MIDCONTINENT During the past decade, museum collections of archaeologically recovered human remains have provided key data for generating models of agricultural intensification in the Midcontinent. In this paper, newly derived $\delta^{13}C$ values from 5 Illinois sites are used to explore inter- and intra-regional patterning in maize dependence during the Woodland and Mississippian periods. The sites reported here include three components of Dickson Mounds, Orendorf, Norris Farms 36, Kane Mounds, and the East St. Louis Stone Quarry.

Nancy J. Parezo (National Science Foundation) UNDERSTANDING AND USING ETHNOGRAPHIC COLLECTIONS Museums hold countless ethnographic and archaeological artifacts waiting to be analyzed in light of recent theoretical advances. Anthropologists, however, have not made effective use of these invaluable resources, partly because most researchers have understood neither the procedures employed in making collections nor the assumptions and decisions that surrounded and informed their construction. This talk will discuss the questions a researcher must ask in order to effectively use ethnographic collections to help address archaeological questions.

PATTERN, PHASE AND FOCUS: A SYMPOSIUM HONORING WILLIAM C. McKERN
Organized by Roland L. Rodell

Alton K. Fisher (University of Iowa) RECOLLECTIONS OF W. C. McKERN WHEN HE WAS CURATOR OF ANTHROPOLOGY AT THE MILWAUKEE PUBLIC MUSEUM McKern was curator of anthropology from January 1925 to November 1943. Prior to his arrival in Milwaukee he had acquired archaeological experience in California, Tonga and the American southwest, and for a year he was instructor in Anthropology at the University of Washington. Mac was an informal and affable man and an excellent teacher. The personal training that was received from him became the foundation for my scientific and academic life. Our most significant collaborative effort was in the initial development of the taxonomic method proposed for midwestern archaeological research.

James B. Griffin (Smithsonian Institution) McKERN AND THE MIDWEST TAXONOMIC METHOD The gestation period of the McKern Classification or Midwestern Taxonomic Method was approximately two to three years, from May 1932 to 1935. It was adopted, attacked and abused by many archaeologists from the Plains to the East Coast and the Gulf of Mexico to Ontario from the mid-1930's to the first decades after World War II. Like all other new developments in archaeology it had its virtues and faults.

Robert L. Hall (University of Illinois at Chicago) WILL C. McKERN AND CERAMIC CHRONOLOGY IN WISCONSIN Although Will C. McKern is remembered outside of Wisconsin principally for his association with the Midwest (or McKern) Taxonomic System, which was conceived to be non-chronological, he also made analyses and recovered material which contributed to our knowledge of ceramic chronology in the Great Lakes area and upper Mississippi valley. The implications of some of his contributions are still fruitful to consider.

Roland L. Rodell (University of Wisconsin-Milwaukee) DIAMOND BLUFF REVISITED: A REVIEW OF THE 1948 EXCAVATION In 1948 the Wisconsin Archaeological Survey (W.A.S.) excavated portions of six mounds and habitation area at the Diamond Bluff site (47-Pi-2) in Pierce County, Wisconsin. The results of this project questioned some basic assumptions regarding the cultural and temporal relationships of Woodland and Mississippian traditions in the upper Mississippi Valley. This paper will review the archaeology of the Diamond Bluff terrace from 1887 to 1948 and discuss the findings of the W.A.S. excavation.

John D. Richards, Patricia B. Bruhy, and Lynne Goldstein (University of Wisconsin-Milwaukee) CULTURE CONTACT IN THE LATE PREHISTORIC AND HISTORIC MIDWEST: FRENCH AND NATIVE AMERICAN INTERACTIONS AS A MODEL FOR LATE WOODLAND-MISSISSIPPIAN DYNAMICS Early Historic period accounts of French and Native American culture contact in southern Wisconsin are used to develop a model for the differential acceptance of fur trade practices among Native Americans. This model is then used to evaluate Late Prehistoric culture contact situations in southern Wisconsin.

Paul P. Kreisa (University of Illinois-Urbana) ONEOTA BURIAL PATTERNS IN EASTERN WISCONSIN Burial data accumulated over the past two decades from Lake Winnebago phase Oneota sites are presented. Analysis of burial attributes indicates a strong patterning in the burial population based on demographic factors. Those burials that do deviate from a basic pattern tend to be older males and a few older females. This pattern suggests a relatively non-ranked socio-political organization for the Lake Winnebago phase Oneota. These data are also compared with burial populations from the Oneota Koshkonong, Grand River, and Orr phases of Wisconsin.

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Cynthia Stiles-Hanson (Mississippi Valley Archaeology Center) **CAVES AND CARVINGS: THREE ROCK ART SITES IN WEST-CENTRAL WISCONSIN** In 1929 W. C. McKern visited several cave and rockshelters in La Crosse, Vernon and Crawford Counties, Wisconsin. Three of these sites- Samuel's Cave, Larson Cave and Indian Cave- have been revisited as part of an ongoing program to document and preserve the rock art in the "Coulee Region." These caves contain some of the best examples of prehistoric petroglyphs and pictographs recorded in the area, as well as some of the worst preservation problems. This paper compares the past and present condition of the sites, damage to the rock art through weathering and modern recreational use of the caves, and steps taken to preserve rock art.

Robert F. Sasso (Northwestern University) **THE WHITE CAMP AND MOUNDS REVISITED** In 1929, the Milwaukee Public Museum began archaeological investigations at two sites on the Mississippi River at Stoddard, Wis. Under Will C. McKern, the excavations yielded data that advanced the understanding of prehistoric cultural relationships in the Midwest. The White Camp II site was the first in Wisconsin to demonstrate chronological relationships through stratigraphic position of Woodland and Upper Mississippian materials. Recent investigations under the Mississippi Valley Arch.Ctr. have yielded more detailed information on prehistoric occupations at the sites, and have defined areal relationships between the habitation and mounds.

Robert Boszhardt (Mississippi Valley Archaeology Center) **MIDWAY VILLAGE REVISITED: IT'S MORE AND LESS THAN WHAT IT USED TO BE** This paper will summarize the previous research at the Oneota Midway Village site in La Crosse County, Wisconsin, including the 1929 investigations by the Milwaukee Public Museum under the direction of W.C. McKern, and present for the first time, salvage efforts by the Mississippi Valley Archaeology Center as the site continues to be quarried away. Preliminary analysis of ceramics reveal that the site contains more than an "Orr Phase/Focus" Oneota component. Rather, the initial Oneota occupation at Midway was by groups producing Silvernale/Blue Earth-like ceramics.

REGIONAL PERSPECTIVES

Charles W. Markman (Northern Illinois University) **CHICAGO AREA ARCHAEOLOGY: WHERE ARE THE DATA?** The first mound excavations in the Chicago area took place just after the Civil War and systematic site recording began at the end of the 19th century. Currently over 500 sites have been recorded for Cook County alone. The local crisis in curation is assessed.

John P. Hart (Northwestern University) **AN ARCHAEOLOGICAL SURVEY OF THE ILLINOIS AND MICHIGAN CANAL NATIONAL HERITAGE CORRIDOR** The Northwestern Archaeological Center, under the auspices of the National Park Service, conducted a random, proportional, double-stratified survey of the Illinois and Michigan Canal National Heritage Corridor during the fall of 1986. This survey was designed to sample the environmental variation among the five geographical subareas of the Corridor and variation within the subareas. Over 8000 acres were surveyed, and 61 prehistoric and eight historic sites were recorded. Analysis indicates that environmental variation did affect prehistoric site location.

Robert J. Jeske (Northwestern University) **TEST EXCAVATIONS WITHIN THE ILLINOIS AND MICHIGAN CANAL NATIONAL HERITAGE CORRIDOR** Northwestern University conducted test excavations at four sites along the Upper Illinois River during the summer of 1987, including the Zimmerman (11-Ls-13) and La Salle County Farm (11-Ls-14) sites. Collection was geared toward recovery of floral, faunal, and radiocarbon samples. Flotation samples from Early, Middle and Late Woodland, and Mississippian features are providing the data necessary to build a ceramic temporal key as well as yielding information on changing subsistence patterns in the late prehistoric periods in northeastern Illinois.

Robert E. Warren (Illinois State Museum) **PREHISTORIC SETTLEMENT PATTERNS IN THE EASTERN PRAIRIE PENINSULA: THE FAP-412 PROJECT** Investigations along an 82-km highway corridor in north-central Illinois indicate there were significant changes through time in patterns of prehistoric upland settlement. Early-Holocene sites are common near glacial kettles on high Woodfordian end moraines; middle-Holocene sites are common near low ground-moraine kettles; late-Holocene sites are prevalent near forested river valleys. Environmental and economic changes probably causes these shifts, yet the magnitude of environmental change apparently was less severe in the eastern Prairie Peninsula than in areas farther to the west.

Stephen C. Lensink (University of Iowa) **POPULATION AND SETTLEMENT TRENDS IN THE UPLANDS OF THE NORTHERN PRAIRIE PENINSULA: A REGIONAL COMPARISON** This paper compares survey results from several upland areas in Iowa and Northern Illinois. Settlement patterns for two areas separated by the Mississippi River show remarkable similar trends through time. During Paleo-Indian and Archaic occupations, settlement location favored glacial wetland habitats. A later Woodland-period trend beginning as early as 1000 B.C. resulted in a population shift to settlements near forested habitats and major drainages. A larger population decline began with the advent of intensive horticulture following A.D. 900.

Mark J. Lynott (National Park Service-Lincoln), Patrick E. Martin (Michigan Technological University), and Caven P. Clark (National Park Service) **ISLE ROYALE ARCHAEOLOGY: 1987** As part of multi-year study of archeological resources at Isle Royale National Park, field crews from the Midwest Archeological Center and Michigan Technological University conducted intensive survey of potentially eroding shorelines in the northeastern third of the archipelago. The field investigations included reconnaissance surveys of likely portage routes and evaluative testing at four sites. The resulting data sheds substantial light on the Late Woodland occupation of Isle Royale.

Flora Church (Ohio State University) **THE RHYTHM OF CHANGE: LATE WOODLAND AND LATE PREHISTORIC SETTLEMENTS IN CENTRAL OHIO** A comparison of Late Woodland and Late Prehistoric settlement system changes has shown that nucleated, sedentary settlements existed in the central Scioto River Valley in the early Late Woodland period. This pattern changed by the late Late Woodland to dispersed settlements. By the early Late Prehistoric period, nucleated sedentary settlements were once more the norm, although the pattern of these communities was much different and persisted over a much greater period of time.

Brian G. Redmond (Indiana University) **YANKEETOWN, DUFFY, OR DUFFYTOWN?: AN EXAMINATION OF CERAMIC VARIABILITY IN THE LOWER OHIO VALLEY** Recent analysis of ceramic material from the Yankeetown site (12W1) has revealed a greater diversity of decorative elements than that indicated by earlier descriptions. In particular, the high frequency of bar-stamped motifs in the sample has demonstrated a closer relationship with Illinois Duff Complex materials than previously suspected. Furthermore, the presence of diagnostic Yankeetown ceramics on sites within the Duffy "core" area suggests that these two complexes may in fact be one in the same.

Michael J. Hambacher (Michigan State University) **OF TRANSITION ZONES AND ARCHAEOLOGICAL INFERENCE** The concept of major biotic provinces and associated ecological transition zones have played a central role in the interpretation of late prehistoric cultural adaptations in the Upper Great Lakes. Broad correlations between differing adaptive modes and the major biotic provinces have been proposed. Expectations concerning the use of the intervening transition zones have also been developed. Recent work suggests that the nature of the ecological transition zones and their role in Upper Great Lakes prehistory are more complex than initially indicated.

RESEARCH IN EXTANT COLLECTIONS: SPECIFIC EXAMPLES

Kenneth B. Tankersley (Indiana University) **A CLOSE LOOK AT THE BIG PICTURE: EARLY PALEOINDIAN LITHIC EXPLOITATION IN THE MIDWEST** Approximately 350 fluted points from ten early Paleoindian sites in Indiana, Kentucky, and Ohio have been petrologically examined. The areal distribution of the lithic resource source areas were compared to the artifacts manufactured from those sources. Restricted lithic exploitation patterns have been identified almost exclusively in lithic procurement areas. Sites outside of lithic procurement areas, on the other hand, display an unrestricted lithic exploitation pattern regardless of their geomorphologic setting: glaciated or unglaciated terrain.

Bradley T. Lepper (Johnson-Humrickhouse Memorial Museum) **REGIONAL PATTERNS OF VARIATION IN OHIO FLUTED PROJECTILE POINTS: AN EXPLORATORY ANALYSIS** An examination of variability in selected attributes of fluted projectile points from Ohio reveals several interesting patterns. The spatial organization of this variability is used here to study the interrelationships between physiography, drainage systems, and aspects of Paleo-Indian technological and social organization. The results of this analysis suggest that fluted point using cultures in Ohio were unspecialized hunter-gatherers. Neither megafauna nor high quality chert provide a sufficient *raison d'être* for inferred Paleo-Indian land use patterns.

Douglas Kullen (University of Chicago) **WINFIELD MOUNDS AND VILLAGE -- FORGOTTEN EXCAVATIONS IN NORTHEAST ILLINOIS** Archeological excavations were conducted more than a decade ago at the Winfield Mounds and Village site in DuPage County, Illinois. Although investigated by the University of Chicago in 1931 and by Wheaton College in 1975-76, no reports on the site have ever been published. This paper utilizes existing collections of unpublished manuscripts, original field notes, and artifacts to summarize both the history of archeological investigations and the prehistory of this site.

Norman Sullivan (Marquette University) and Carter Lupton (Milwaukee Public Museum) **RESEARCH POTENTIAL OF HUMAN REMAINS IN EXTANT ARCHAEOLOGICAL COLLECTIONS** Human remains form a significant proportion of many extant archaeological collections - a basic source of information on adaptations of past populations, largely underutilized and essentially non-expandable. Projects at the Milwaukee Public Museum have dealt with osteological remains excavated in Wisconsin during the 1920's through the 1940's and Egyptian mummies held for over a century. These projects have demonstrated that extant collections, when studied with new techniques, can yield significant insights into current research problems.

James A. Marshall (Schaumburg, IL) **RESEARCH POTENTIAL OF THE MARSHALL SURVEYS AND MAPS OF EARTHWORKS OF EASTERN UNITED STATES** Correcting 100 or more year old surveying and mapping errors of Squier and Davis, Whittey, Thomas and others; establishing a chronology of these constructions; providing maps for analysis by military scientists; comparing sites with those in Europe and elsewhere; determining patterns of replication; deriving mathematical and astronomical knowledge of builders; monumenting sites by establishing bench marks; locating lost sites and finding new sites; establishing a permanent record of sites.

Annette G. Ericksen-Latimer and Marilyn R. Orr (Ohio State University) **THE HORSESHOE CAVE COLLECTION: RECENT RESEARCH FROM THE JOHNSON-HUMERICKHOUSE MEMORIAL MUSEUM** Horseshoe cave was excavated in 1969 and the collection donated to the Johnson-Humerickhouse Memorial Museum in Coshocton, Ohio. Following a flurry of interest over associated pictographs, the collection fell into obscurity. As a result of efforts to identify and catalog archaeological collections at the museum, these materials have been analyzed. The result is the identification of a multi-component occupation and varied artifact assemblage which adds to our understanding of prehistoric rock shelter utilization.

MOUND 72: EARLY MISSISSIPPIAN SOCIAL STATUS, SITE STRUCTURE, AND SPECIALIZED PRODUCTION AT CAHOKIA Organized by Melvin L. Fowler

Melvin L. Fowler (University of Wisconsin-Milwaukee) **STRATIGRAPHY, SEQUENCE AND SIGNIFICANCE OF MOUND 72** Mound 72 was located at a strategic point relative to the Early Mississippian planning of the Cahokia site. The mound was built up in a sequence of post pits, primary mounds, and burial offerings in pits, spanning a short period of time, between 950-1050 A.D. Status of individuals buried within the mounds probably related to their relationship of the early marker posts. Materials found as grave offerings indicate far flung economic ties.

Jerome C. Rose and Philip Hartnady (University of Arkansas-Fayetteville) **BIOARCHAEOLOGY OF MOUND 72, CAHOKIA** Excavation of Mound 72 Cahokia produced a total of 261 individuals which may be grouped as follows: female sacrifices, 4 features, 118 individuals; mixed sex sacrifices, 1 feature, 39 indiv.; male sacrifices, 1 fea., 4 indiv.; litter burials, 2 feas., 24 indiv.; midstatus, 13 fea., 59 indiv.; and high status, 1 fea., 17 indiv. The High status have the lowest infection rate (5.3%) followed by female sacrifices with 10.4%, and the midstatus burials with 25.0%.

Barbara VanderLeest (Carefree, AZ) **THE CERAMICS OF MOUND 72, CAHOKIA** This paper will present data on the ceramic materials recovered from Mound 72, Cahokia. The analysis will describe the single component assemblage, identify interval variation within and between features and between mound construction stages, and examine the use of ceramics as grave accoutrement. Comparisons will be made with recently recovered archaeological data from the American Bottom.

Steven R. Ahler (Illinois State Museum) **LITHIC MATERIALS FROM MOUND 72, CAHOKIA** Lithic materials recovered from Mound 72 include over 1000 projectile points from three separate caches. Examination of these points indicates that several different morphological styles are present, and these styles are spatially segregated in two of the caches. Examination of the chert debitage from the mound indicates that the projectile points were not manufactured at the mound. Instead at least two specialized unifacial industries were identified, resulting in production and immediate use of large blade-like flakes and micro-drills. Implications of these different patterns of lithic use and deposition are explored.

SINGLE-SITE RESEARCH: REPORTS OF INVESTIGATIONS

Marla Buckmaster (Northern Michigan University) **THE GORTO SITE IN MARQUETTE COUNTY, MICHIGAN** The Gorto site is located in the bottom of Deer Lake Reservoir in Marquette County, Michigan. The site was exposed when the reservoir was drained in an attempt to cleanse the lake of mercury contamination. Northern Michigan University, with the help of volunteers, surface collected the site and excavated two 2 x 2 meter test units before the reservoir was refilled. Thirty-eight Late Paleo-Indian projectile points were recovered. Fourteen Scottsbluff and two Eden points are among the recovered materials.

Toby Morrow (Center for American Archeology) **TWIN DITCH: INVESTIGATIONS AT AN EARLY ARCHAIC SITE IN THE LOWER ILLINOIS VALLEY** Excavations at the Twin Ditch site by the Center for American Archeology's Education Program have revealed a rich, stratified Early Archaic site on the Illinois River floodplain. Two distinct horizons were discovered. The upper zone yielded a variety of Middle Archaic and late Early Archaic diagnostics. The Lower component is a well preserved Thebes Cluster site producing Thebes knives, St. Charles points, a variety of other tools, and faunal remains.

Jacqueline A. Ferguson and Robert E. Warren (Illinois State Museum) **ARCHAEOLOGICAL AND GEOLOGICAL FIELDWORK AT THE TONICA KETTLE SITE IN NORTH-CENTRAL ILLINOIS** Recent fieldwork has been conducted in and around an upland glacial kettle in north-central Illinois (FAP-412 project). The kettle, situated on a Woodfordian ground moraine, has produced evidence of late-Pleistocene and possible

Holocene biota (pollen, wood, spruce cones, aquatic snails, beetles, birds, turtles). The biota may provide evidence of the local environmental context of a large Middle Archaic site (c. 8000-5000 BP) that rings the kettle. Excavations at the site uncovered a rectangular structure and other features, which provide new information on the upland adaptations of Middle Archaic hunter-gatherers.

James A. Robertson (Michigan State University) **SITE TYPOLOGIES: A LESSON FROM A MIDDLE ARCHAIC SITE IN SAGINAW COUNTY, MICHIGAN** The Weber I site (20SA581) is a Middle Archaic site located along the Cass River near Frankenmuth, Michigan. Spatial and microwear (high power method) analyses suggest that Weber I was briefly occupied by a small residential group(s). A range of both subsistence related and manufacturing activities took place. These findings are evaluated in light of current site typologies. This site illustrates that there is much more variation and many more complexities in hunter-gatherer settlement systems than many of our models and site typologies are capable of predicting or encompassing.

Kathryn C. Egan (Michigan State University) **ANALYSIS OF THE FLORAL REMAINS FROM THE WEBER I SITE (20SA581) FRANKENMUTH, MICHIGAN** Recent analysis of the archaeobotanical assemblage from the Middle Archaic and terminal Late Archaic Weber I site in the Saginaw Valley of Michigan provides new information about the environmental setting and subsistence activities of these populations. Comparisons with other archaeobotanical assemblages suggests that a generalized and opportunistic subsistence strategy developed during the Archaic period in this region. This strategy was an adaptation to the diverse and patchy environment of the region.

John F. Doershuk (Northwestern University) **ARCHAEOLOGICAL RECONNAISSANCE AND TESTING AT THE JOLIET ARMY AMMUNITION PLANT, WILL COUNTY, ILLINOIS** Archaeological testing around the Arsenal Site (11-Wi-241), located on Joliet Army Ammunition Plant property in southwestern Will County, Illinois, is described and results presented in light of previous area research and associated sites. Investigations initially focused on Plenemuk Mound, an intact late prehistoric burial facility, but later shifted to a buried Archaic layer located stratigraphically beneath the mound. This undisturbed deposit yielded numerous artifacts and lithic debitage, permitting characterization of technological aspects of this relatively early northeastern Illinois assemblage.

Mark L. Anderson (Ball State University) **THE RESCUE EXCAVATIONS OF THREE LATE ARCHAIC SITES IN THE MARKS BAY PARK RESERVE, SAULT STE. MARIE, ONTARIO, CANADA** Three archaeological sites, from the Late Archaic period, are examined in this paper. The sites are located in the Marks Bay Park Reserve, approximately 15 km. west of the city of Sault Ste. Marie, Ontario. The purpose of the excavations are two-fold. Since the sites are located on sand beach ridges in a riverine context, the first objective was to rescue the sites from destruction due to erosion by the St. Marys River. Using the archaeological information gained during three seasons of fieldwork and the description and analysis of the information, the second objective was to study the settlement and activity patterns of the occupants.

Elizabeth D. Benchley (University of Wisconsin-Milwaukee) **THE TROUT POINT SITE: A LATE ARCHAIC(?) LITHIC WORKSHOP(?) AND WARMING STATION(?) (BAKE SHOP?) (SAUNA?) (LIGHT HOUSE?) ON THE SOUTH SHORE OF LAKE SUPERIOR, MICHIGAN** The Trout Point Site, on the Hiawatha National forest, is located on a 65 foot high bluff top overlooking Lake Superior just off Munising, Michigan. The prehistoric site is a concentrated area of quartzite cores and flakes and fire-cracked quartzite cobbles. No temporally diagnostic artifacts were found during data recovery and no organics were preserved in the acidic soils. Analysis of the 1200 pounds of rock collected during data recovery focused on understanding the lithic tool production systems in evidence at the site. Thermoluminescence dating of fire cracked rock samples provided a date of 2,300 BP.

Dale W. Quattrin and William M. Cremin (Western Michigan University) **A UNIQUE FEATURE AT THE SCHILLING SITE (20KZ56), KALAMAZOO COUNTY, MICHIGAN** During archaeological excavation of the Schilling site in 1984, excavators encountered a massive concentration of fire-cracked rock in a matrix of charcoal impregnated soil suggesting very substantial firing and the subsequent shattering of perhaps several thousand large cobbles of locally derived till material. It is suggested that this feature represents an episode(s) of ritual purification (i.e. sweat lodge) dating to 2300 radiocarbon years BP.

William S. Dancey (Ohio State University) **THE WATER PLANT SITE: AN EARLY LATE WOODLAND VILLAGE IN CENTRAL OHIO** Systematic surface collection and testing in 1980 at 33-Fr-155 in central Ohio produced evidence of a 3.15 ha early Late Woodland settlement on a 12 m high bluff enclosed by a c-shaped ditch. Chesser Notched points and ceramics resembling Newtown Cordmarked dominate the assemblage. Radiocarbon dates from feature fill samples fall in the 6th century A.D. An analysis of the internal layout of the settlement is the subject of this paper.

Paul J. Pacheco (Ohio State University) **SALVAGE EXCAVATIONS AT THE CONTINENTAL CONSTRUCTION SITE** In the summer of 1986 the Licking County Archaeology and Landmarks Society in conjunction with the Ohio State University conducted salvage excavations at the construction site of the new Chillicothe Mall, Ross County, Ohio. A total of 27 cultural features were investigated in the course of a two week period. Stratified floodplain deposits revealed pit features, hearths, and human burials. This report focuses on the recovered material, with emphasis on the Early and Late Woodland periods.

Albert H. Brine (Springfield, IL) **LAND SNAILS FROM EILERS (11CS20): A MIDDLE TO EARLY LATE WOODLAND SITE IN CENTRAL ILLINOIS** Analysis of land snails from the Eilers site test excavations indicate a stable forest during the Havana phase, changing to a less stable, more open environment during the subsequent Weaver phase. It is suggested that this change in environment was the result of ameliorating climatic conditions.

Barbara L. Barrish (Cleveland State University) **PRELIMINARY ANALYSIS OF A LATE WOODLAND BURIAL SITE IN NORTHEAST OHIO** The Norma Grantham Site in Fairport Harbor, Ohio provides a unique resource for the study of the Late Woodland in Northeastern Ohio, particularly in aiding to reconstruct information on the prehistoric society that inhabited this area c. 400 years ago. 152 burials have been excavated and removed for analysis, along with other cultural remains. The topic of discussion is the preliminary analysis of the skeletal material from this site. Included are the criteria used for sex and age determination, their distributions within the population, as well as a brief discussion of gross macroscopic observations of disease and injury.

Charles R. Moffat (American Resources Group, Ltd.) **INVESTIGATIONS AT THE LITTLE MUDDY ROCK SHELTER, JACKSON COUNTY, ILLINOIS** During 1985 and 1986 American Resources Group excavated the Little Muddy Shelter, a stratified site with thirteen components dating from c. 7200 B.C. to 650 B.P. The site is located in the till plains of southern Illinois on a low terrace adjacent to a large tributary of the Big Muddy River. The site features a particularly detailed Late Archaic and Woodland period sequence and contains the earliest radiocarbon dated Crab Orchard tradition occupation in southern Illinois.

PERSPECTIVES ON HISTORIC ARCHAEOLOGY

Keith L. Barr (Illinois State University) **MATERIAL CULTURE ON THE MIDWESTERN FRONTIER** The American Frontier has long been a fertile theme in our nation's scholarly and popular literature. It has inspired novelists, historians, film writers, and even archaeologists. As a part of his famous frontier thesis, Frederick Jackson Turner stated that when the European went to the frontier his life was ordered by the wilderness conditions he met there. This paper will compare and contrast some of Turner's ideas about material culture with evidence found in the archives of an Illinois county during the frontier period.

Guy Gibbon (University of Minnesota) **THE SAVANNA PORTAGE** Results of several years of survey and excavation along the Savanna Portage connecting the Great Lakes and the Mississippi River system in Minnesota are summarized. Historical Archaeology, fur trade, Western Great Lakes.

Carol Mason (University of Wisconsin-Fox Valley) **INDIANS, MAPLE-SUGARING, AND THE SPREAD OF MARKET ECONOMIES** The history of world-wide sugar production makes indigenous maple-sugaring an unlikely prehistoric pattern.

Thor Conway (Ontario Ministry of Citizenship & Culture) **ARCHAEOLOGICAL EVIDENCE FOR ALGONKIAN SHAMANISM** Archaeological investigations in northeastern Ontario have revealed evidence of prehistoric and early historic shamanism. An early historic Ottawa village site in northern Lake Huron contained a series of ritually killed dogs, as well as beaver burials and eagle burials, that relate to the Wabeno and Midewewin forms of Algonkian shamanism. An Ojibwa site at Sault Ste. Marie has similar animal interments plus the buried paws from black bears. Interpretation of these features relies on historical accounts of shamanic activities as well as recent ethnographic fieldwork with Ojibwa and Ottawa shamans.

MISSISSIPPIAN AND LATE PREHISTORIC MANIFESTATIONS

Duane Esarey (Dickson Mounds Museum) **MISSISSIPPIAN SPIDER GORGETS** Marine shell gorgets decorated with life-like depictions of a spider are a well-known, but relatively rare, Mississippian Period art form. Examples of 36 spider gorgets are presented and discussed. Nearly all of the 25 spider gorgets found in the Midwest fall into Phillips and Brown's (1978) tentative McAdams style. Stylistic variation among the McAdams style spider gorgets is explored and potential explanations offered.

Susan Jelly (University of Illinois-Urbana) **PRELIMINARY REPORT ON THE EXCAVATIONS AT ORENDORF MOUNDS** This is a report of 1986 and 1987 field school excavations at the burial mounds associated with the Mississippian Orendorf Village site in the central part of the Illinois River Valley. The report also includes information from a transitional Late Woodland occupation found under the mound area.

Sherri L. Hilgeman (Indiana University) **PATTERNING IN THE FILL OF A MISSISSIPPIAN HOUSE BASIN** Materials from Mississippian house floors are of interest because they might provide some information on the range and location of household activities. After abandonment, however, house basins fill and the patterning is blurred. Observations made during the excavation of an Angel phase house suggested that the floor was cleaned, the house burned, and the basin filled by natural erosional processes and some dumping of refuse. The patterning of artifacts in the fill is examined to distinguish it from patterns that were the result of household activities.

Mark Schurr (Indiana University) **PREHISTORIC MORTUARY BEHAVIOR AT THE ANGEL SITE** Excavations at the Angel Site (12Vg1), a large Mississippian ceremonial center in southwestern Indiana, produced a well documented skeletal series. The demographic structure of this sample of human remains is unlikely to be an accurate estimator of that of the prehistoric population because the demographic structure of the Angel skeletal series was partially determined by prehistoric mortuary behavior. The social and biological dimensions of Angel mortuary practices therefore cannot be considered independently.

Dale R. Henning (Luther College) **WESTERN ONEOTA: A PERSPECTIVE FROM THE BLOOD RUN SITE, NORTHWEST IOWA** The Blood Run site was nominated to the National Register and given Landmark status on the basis of its size (over 650 acres) and the number of surface features which are still extant. Because of site destruction due to gravel removal and efforts by the State of Iowa to acquire portions of the site, two seasons of subsurface investigations have been conducted. Site function and the system of interrelationships participated in by those who used the site are considered.

Clark A. Dobbs and Kim C. Breakey (Institute for Minnesota Archaeology) **A PRELIMINARY REPORT ON INVESTIGATIONS AT THE ENERGY PARK SITE (21GD158): A SILVERNALE PHASE VILLAGE AT THE LAKE PEPIN LOCALITY** The Energy Park Site is a recently discovered Silvernale Phase village near Red Wing, MN. This site (21GD158) appears to be associated with a nearby flat-topped pyramidal mound. This paper discusses the first two seasons of work at the site and reports on the results of controlled surface collection, soil-resistivity studies, and excavation. Galena cubes, ceramics from both Silvernale and Oneota groups, and numerous pit-features have been exposed at the site.

Joseph Craig (Northern Illinois University) **INVESTIGATIONS AT AN UPPER MISSISSIPPIAN LANGFORD TRADITION SITE IN THE CALUMET CITY QUADRANGLE, COOK COUNTY, ILLINOIS** The Northern Illinois University field school investigated a Langford Tradition site situated on a Pleistocene beach ridge south of Chicago. Late Woodland and Upper Mississippian ceramics were recovered. Presented are preliminary results of on-going analysis and interpretations of the site's regional prehistoric context.

William M. Cremin (Western Michigan University) **UPPER MISSISSIPPIAN ADAPTATION: A TEN YEAR PERSPECTIVE ON SOUTHWEST MICHIGAN** Ten years ago, archaeologists at Western Michigan University commenced a program of research that represents the first substantive investigation of the Upper Mississippian occupation of Michigan since the 1940's. Through both survey and excavation we have sought to collect information regarding late prehistoric subsistence-settlement behavior that would enable us to better understand how the mixed economic strategy characteristic of historic Native Americans took root in this area. Both the successes and failures of this endeavor are presented.

John P. Nass (Ohio State University) **THE ANALYSIS OF STORAGE FEATURE VOLUME AS A TECHNIQUE FOR STUDYING FORT ANCIENT HOUSEHOLD ORGANIZATION AND COMMUNITY STRUCTURE** Excavation at the Incinerator Site in Dayton, Ohio by the Dayton Museum of Natural History has exposed over 65% of the community plan and indicates a site structure composed of concentric bands of burials, features, a structure around a central plaza. The purpose of this paper is to provide additional insight into the social organization of Fort Ancient communities in general, and the Incinerator Site specifically, by isolating households and comparing their material assemblages. The analysis supports the idea that a two part division, one domestic and one civic/ceremonial, exists at the site.

Charles R. Ewen (Florida Bureau of Archaeological Research) **THAT WAS NO PICNIC: CURRENT RESEARCH AT THE SITE OF DE SOTO'S FIRST WINTER ENCAMPMENT** The location of Hernando de Soto's winter encampment of 1539-40 has long been a topic of debate among archaeologists and historians alike. Recent discoveries by state archaeologists (Bureau of Archaeological Research) indicate that at least part of the site is located inside the city limits of Tallahassee, FL, and within sight of the capitol building. Working just ahead of development activities, salvage excavations have recovered features and artifacts characteristic of the late Fort Walton and 16th century Spanish periods.

HOPEWELL AND MIDDLE WOODLAND RESEARCH

John K. White (Ancient Lifeways Institute) **INDICATIONS OF MIDDLE WOODLAND MULTI-SITE CEREMONIALISM IN THE LOWER ILLINOIS VALLEY** A combination of aerial photography and ground observation of previously excavated but unmapped sites has revealed geometric configurations of mounds and solar equinox and solstice alignments of earthworks within and between sites. Mound groups on opposite sides of the Illinois River reveal a unity of planning through alignment of mounds on the same East/West axis. Multi-site Ceremonial Centers with a concern for solar phenomenon and geometric relationships in the placement of earthworks are indicated.

Joyce A. Williams, Thomas O. Maher, and Kathryn Parker (University of Illinois-Urbana) **THE MERIDIAN HILLS SITE (11-MS-1258): AN UPLAND MIDDLE WOODLAND EXTRACTIVE SITE** The Meridian Hills site, located southwest of Edwardsville, Illinois, is situated on the bluffs forming the eastern boundary of

the American Bottom. The site has recently been destroyed by residential construction. Through the efforts of amateur and professional archaeologists, 72 pit features were mapped and excavated. The fill from most pits was floated. The cultural materials recovered indicate an upland manifestation of a recently identified Hopewellian occupation in the American Bottom.

Robert B. Pickering (Field Museum of Natural History) **EXAMINATION OF A MIDDLE WOODLAND OSSUARY FROM WILL COUNTY, ILLINOIS** An unusual ossuary dating from the Middle Woodland period was encountered on the bluffs of the DesPlaines River during recent construction in Will County, Illinois. The remains included at least eleven adults and four juveniles. None of the remains appear to have been interred as complete skeletons, although at least five of the skeletons have most portions of the body represented. The most striking aspect of this small series is the great amount of pathology and trauma represented. Five healed fractures were observed in the sample of ten adults.

Charles B. Stout (University of Illinois-Urbana) **THE MUSHROOM SITE (20AE88): LONELY CAMPFIRES ON THE BLUFF** The Mushroom site contains the only prominent Middle Woodland component within the Kalamazoo Valley of southwestern Michigan. Based on excavation and surface collection data, it is suggested that this site was primarily a warm season encampment, occupied by a few family-sized groups at a time. There was apparently little interest in making Mushroom a more permanent habitation site like many of those in nearby river valleys, which reopens questions regarding Middle Woodland site selection criteria.

John Edward Blank (Cleveland State University) **HOPEWELLIAN LANDFORM UTILIZATION PATTERNS IN THE CENTRAL SCIOTO RIVER VALLEY, ROSS COUNTY, OHIO** Analysis of landform (glacial geomorphology, soil association and stream terrace - based upon the recently published *Glacial Geology of Ross County, Ohio*, [Quinn and Goldthwait 1986]) has been carried out for all 127 known Hopewellian sites in Ross County, Ohio. The 34 known Hopewellian geometrical earthworks display a highly selective distribution - being limited to Circleville Outwash Terraces of terminal Wisconsin age. Several hypotheses explaining this limited distribution are explored.

N'omi Greber (Cleveland Museum of Natural History) **SHETRONE'S MOUND 17 AT THE HOPEWELL SITE, ROSS COUNTY OHIO: EXCAVATED 1924; STUDIED 1986** In 1924 Henry C. Shetrone of the Ohio Historical Society excavated one of the smaller mounds of the Hopewell Site. He did not find burials. He did find two major deposits of Hopewell artifacts. A current study of the field notes and materials recovered more than fifty years ago from this small mound help in expanding our understanding of some of the activities undertaken by Hopewell peoples at this major site.

Richard W. Yerkes, John P. Nass, Jr., and Elizabeth K. Griebing (Ohio State University) **STONE TOOL FUNCTION AND ACTIVITY PATTERNS AT THE MURPHY SITE, A HOPEWELL SETTLEMENT IN LICKING COUNTY, OHIO** The results of a microwear analysis of 678 bifaces, bladelets, and flake tools from the Murphy site (33-LI-212), a Hopewell habitation site located west of the Newark Earthworks, are presented. The functions of chipped stone tools from 23 pit features and postholes and non-feature samples indicate that the site was a small, domestic "hamlet" that was occupied for short periods of time between 100 B.C. and A.D. 200, possibly on a seasonal basis. Results support the earlier interpretations of activities at the Murphy site.

Dee Anne Wymer (Licking County Arch. & Landmarks Society) and Paul J. Pacheco (Ohio State University) **CORRESPONDENCE ANALYSIS: PALEOETHNOBOTANICAL DATA AND THE MIDDLE WOODLAND TO LATE WOODLAND TRANSITION** Paleoethnobotanical analysis of Middle Woodland and Late Woodland sites in central Ohio has demonstrated subsistence continuity between the two periods. However, the assumptions of sample, feature, and site comparability and similarity of disposal and deposition patterns across time can always be questioned. A new statistical approach, correspondence analysis, has been used to explore the similarity and variability of the central Ohio samples, providing insights into understanding cultural change from A.D. 200 to A.D. 800.

Frances Clark (Cleveland Museum of Natural History) **ANCULOSA SHELL BEADS AND MIDDLE WOODLAND EXCHANGE** Anculosa shell beads, usually associated with Illinois Late Woodland burials, may have played a small role in the Middle Woodland Hopewell exchange system. Fourteen Anculosa beads were found recently in dated context in a North Dakota burial mound near the source of Knife River flint (KRF). An Illinois Hopewell burial at the Snyders site included 496 Anculosa beads in direct association with a KRF Ross barbed blade. Possible implications of these occurrences will be discussed.

Eleanor P. White (Ancient Lifeways Institute) **CURRENT ANALYSIS AND REPLICATION OF HOPEWELL TEXTILES** This presentation describes research into textile remains and textile impressions found on copper artifacts from the Hopewell Mound Group in the collections of the Field Museum (Chicago). The author, adept in ethnographically-known Native American Woodlands weaving, has identified textiles constructed by a number of techniques, including previously undescribed color-patterned twining and a ubiquitous fine gauze cloth found on most copper artifacts. She has replicated the latter two weaving techniques.

HISTORIC ARCHAEOLOGY: 19TH CENTURY SITES Organized by Robert A. Birmingham

Floyd Mansberger (USACOE-Rock Island District) **URBAN ARCHEOLOGY: AN OFTEN OVERLOOKED CONTEXT FOR SIGNIFICANT CULTURAL RESOURCES** Historic archeology - especially that associated with the 19th-century - has finally become a viable research interest in Illinois and the midwest. Although some urban archeology has been conducted, the majority of the significant research in Illinois has been associated with rural farmsteads. This paper will present two urban projects which were conducted in urban settings - areas which were thought to be "hopelessly disturbed". The results of the two projects was the recovery of early to mid 19th century cultural material that has contributed significantly to the understanding of mid 19th century lifestyles.

Candace J. Lutzow (American Resources Group, Ltd.) **THE DAVIS SITE: RECONSTRUCTION OF HISTORIC SUBSISTENCE MODELS COMBINING ARCHAEOLOGICAL AND ORAL HISTORY DATA** Botanical material recovered during excavation of the historic Davis site in Perry County of southern Illinois (1840-1865) provides evidence for ambient environment reconstruction and potential resource exploitation. This paper takes ameliorative steps to abate the paucity of historic ethnobotanical data through the synthesis of archaeological data and oral histories contributed by rural southern Illinois elders for the development of rural subsistence model dependent upon agricultural as well as indigenous plant species.

Mary R. McCorvie (American Resources Group, Ltd.) **THE DAVIS SITE: A MID-NINETEENTH CENTURY FARMSTEAD IN SOUTHERN ILLINOIS** Archaeological investigations at the Davis site revealed the presence of a variety of feature types including cellars, wells and cisterns, storage/refuse pits, smudge pits, a molasses furnace, and smokehouse. This site was occupied from 1840 to 1865. Information from the excavations and probate records indicate that the site functioned as a farmstead with a reliance on corn and pork but with other subsistence items represented including cattle, sheep, wheat, molasses, cotton, tobacco, cabbage, and potatoes.

Mark Bruhy (USDA Forest Service-Nicolet Nat'l Forest) **LATE 19TH AND EARLY 20TH CENTURY HISTORIC PROPERTIES IN NORTHERN WISCONSIN'S NATIONAL FORESTS** The USDA Forest Service has been conducting cultural resources survey in northern Wisconsin for the past ten years. Approximately 1500 historic properties have been located in the on-going surveys, and the types of recorded sites range from those attributable to the Paleo-Indian Tradition through the relatively recent period of pioneer Euro-American settlement. Clearly, sites dating to the late 19th and early 20th century are the major representations in the current inventory, and this discussion will focus on the range of settlement and industrial expressions manifest in these sites.

Patrick E. Martin (Michigan Technological University) **WORKERS' HOUSING IN A NINETEENTH CENTURY COMPANY TOWN** Recent excavations within Fayette State Historic Park concentrated on the ruins of two log houses formerly occupied by the families of laborers employed by the Jackson Iron Company. Active between 1867 and 1891, this company town was established to support the operation of two charcoal-fired blast furnaces to smelt the iron ore of the Negaunee mine. Excavation revealed a great deal about the lifeways of these lower-class workers, including information about construction techniques, dietary choices, social status, and the persistence of ethnicity.

Terrence J. Martin (Illinois State Museum) **ANIMAL REMAINS FROM LABORERS' HOUSES AT FAYETTE, A LATE 19TH-CENTURY INDUSTRIAL COMMUNITY IN NORTHERN MICHIGAN** A faunal assemblage of over 4000 specimens was obtained from the investigation of two laborers' houses at the Fayette State Historic Park located on the Garden Peninsula of northern Michigan. Analysis of these collections contributes to a perception of subsistence activities and refuse disposal practices by the families of lower class unskilled or semi-skilled workers who were employed by the Jackson Iron Company during the period of 1867 to 1891.

Ann Koski (Neville Public Museum) and William Krueger (Heritage Hill State Park) **SEARCH FOR SHANTY TOWN** This paper is a report on archeological investigations conducted by the Neville Public Museum and Heritage Hill State Park to determine the cultural resources of Heritage Hill. The western boundary of the state park has been noted as a possible location for Shantytown. Shantytown was the first yankee settlement in the Green Bay area in Wisconsin. It was established in 1820 as an adjunct community to Camp Smith. Archeological investigations included literature search, fieldwork, and preliminary lab analysis. This report will cover all three phases.

Robert Boszhardt and Cynthia Stiles-Hanson (Mississippi Valley Archaeology Center) **HISTORIC ARCHAEOLOGY IN WESTERN WISCONSIN BY THE MISSISSIPPI VALLEY ARCHAEOLOGY CENTER** In conjunction with the Region 6 Archaeology Program (of western Wisconsin), the Mississippi Valley Archaeology center has undertaken several historic archaeological projects. These include public field schools at the Peter Flurey site (a stone arched structure in the hills bounding La Crosse) and Spence Park; as well as management research including an archival study of aboriginal cemeteries at La Crosse, and of the 1870 wreck of the steamboat War Eagle. This paper will briefly summarize these historic archaeological projects, and focus on the Spence Park and War Eagle research.

Philip Salkin (Archeological Consulting and Services) **A PRELIMINARY REPORT ON MITIGATION EXCAVATIONS AT THE BROWER STORE IN PRAIRIE DU CHIEN, WISCONSIN** In August 1987 personnel from Archeological Consulting and Services conducted a program of mitigation excavations at the Brower Drugs/Dry Goods Store in Prairie du Chien, Wisconsin. Excavation revealed the foundation of a substantial structure, 16 x 15 m. in size. Associated artifacts and archival research indicated the structure functioned as a wholesale drug and dry goods business from the late 1850's to late 1870's. Upstairs living quarters were also indicated. The large artifact assemblage may help document the position of Prairie du Chien as a regional transportation and economic center in the 19th century.

Wil Gilmore (Cultural Resources Consultant) **HISTORICAL ARCHAEOLOGICAL INTERPRETATION AT VILLA LOUIS** Historical archaeological interpretation goes beyond the identification of the place and time of a particular event or erection and modification of a structure. Discussion will briefly describe the elements of historical archaeological research and interpretation utilized during investigations conducted under the preserve House at Villa Louis, the residence of Doussmans in Prairie du Chien. Typical of such projects, stabilization of the building's foundations rather than any research program initiated investigations. In this project, the historical data, the written, oral, and pictorial data, were used to complement the archaeological evidence.

METHODS, TECHNIQUES, AND OTHER APPROACHES TO ARCHAEOLOGY

Kevin P. McGowan (University of Illinois-Urbana) **BATHTUB SAMPLING: A POST-IMPOUNDMENT RESERVOIR SURVEY** An examination of the survey area specified by contracts led by the U.S. Army Corps of Engineers, St. Louis District for a post-impoundment pedestrian survey of Lake Shelbyville, Illinois between 1979 and 1973 has resulted in the recognition of a rather special type of sample: the "Bathtub Sample." This paper defines the "Bathtub Sample" and explores the advantages and disadvantages of this type of sample for studying prehistoric cultures.

John Claflin (Diachronic Research Associates) **LOOKING FOR MOM: A COMMENTARY ON RELATIONSHIPS BETWEEN PROFESSIONALS AND AMATEURS** During the last two decades, as dependence on contract archaeology has grown, reliance upon the local collector as a resource for general or site specific information has diminished. Concurrently, an increased hostility by professional archaeologists toward these individuals has been noted. This presentation examines the utility of the layman in contract archaeology, with reference to data gathered from three sites in Central Illinois. Some suggestions are offered for taking advantage of collector-generated data in order to more accurately evaluate specific sites, as well as to broaden support for archaeology at the grass roots level.

M.H. Sidky (Ohio State University) **MATERIALISM AND MARXISM: A NECESSARY ALLIANCE?** Interest in Marxist theory among American archaeologists and anthropologists has in the last few decades led to a variety of perspectives professing Marxist orientation. Ranging from economic determinist perspectives such as cultural materialisms to positions such as structural Marxism, each of these theoretical stances claims to offer a "materialist" framework for interpreting sociocultural phenomena. This paper examines some of these positions asking whether one necessarily has to adhere to a "Marxist" orientation in order to produce parsimonious materialist explanations.

Richard E. Bisbing (McCrone Associates, Inc.), William A. Lovis, and Norman J. Sauer (Michigan State University) **FORENSIC ARCHAEOLOGY: TRAINING FORENSIC SCIENTISTS IN HUMAN REMAINS RECOVERY TECHNIQUES** Forensic scientists and archeologists often have a common purpose. This paper describes a program designed and implemented by the Michigan State Police and Michigan State University to train forensic scientists. The training includes lecture and practice in basic survey techniques, excavation, recovery of buried evidence, and preliminary identification of decomposed human remains. Liaisons should be developed between archeologists, physical anthropologists, and forensic scientists in order to promote mutual assistance and training.

Mark L. Madsen (Roosevelt University) **CONTINUING PATTERNS OF LITHICS DISTRIBUTION AT TWO ENDANGERED POPLAR CREEK SITES THROUGH TWO PLOWING SEASONS** Between 1986 and 1987, thorough surface surveys were conducted at two of the last farm fields west of Elgin. Recurring patterns were noted between the two seasons' charts. Middle, Late Woodland, and Mississippian sites were limited to the same area locations. Although a new range of cultural materials made their appearances after the second plowing, the results of the surveys showed that greatest concentration of classic artifacts were located within one hundred paces of the creek bed.

Robert G. Thompson (University of Iowa) and Micheal Timpson (University of Tennessee) **THE GEOARCHAEOLOGY OF THE DAHNKE/REINKE SITE (32CS29)** The Dahnke/Reinke site is a multi-component site located at the junction of the Sheyenne River and Red River in Cass County, North Dakota. Buried landscapes represented by pedologic discontinuities correspond with cultural material. Slight differences in elevation on the same terrace were found to have a great difference in degree of deposition of alluvial material. Study of the directional orientation of the long-axis of artifacts reflected a varying degree of disturbance by moving water.

Jodie A. O'Gorman (Mankato State University) **PRELIMINARY FINDINGS OF A COMPARATIVE STUDY ON THREE PREDICTIVE FIELD METHODS APPLIED AT THE "OT" SITE, WIS.** During the 1987 field season a study was undertaken in southwestern Wisconsin at the "OT" site (47-Lc-262) in order to contrast and compare the utility and efficacy of three relatively non-destructive, predictive field methods; electromagnetic survey, self-potential survey and phosphate analysis. The test results and a preliminary report on the findings at the Oneota site are presented.

Keith A. Sverdrup (University of Wisconsin-Milwaukee) and James Stoltman (University of Wisconsin-Madison) **A RESISTIVITY SURVEY AT THE FRED EDWARDS SITE (WISCONSIN)** An electrical resistivity survey was conducted at the Fred Edwards (Oneota) site. Four E-W survey lines spaced 1-2 meters apart and extending roughly 25-30 meters in length were run. The lines began over a previously exposed but not excavated feature. All lines consistently showed two high relative resistivity anomalies; one over the known feature, and a second which was subsequently excavated to reveal a substantial house site.

James G. Foradas (Ohio State University) **SITE GEOPHYSICAL SURVEY POSSIBILITY EVALUATIONS: MAKING LIFE EASIER FOR THE GEOPHYSICIST ON AN ARCHAEOLOGICAL SITE** For decades archaeologists have been assisted by geophysical prospecting in the exploration for, and identification of, subsurface archaeological features. Geophysical survey is not "standard" archaeological procedure due in part to poor geophysicist-archaeologist communication. Standard site-survey forms do not presently provide geophysically relevant information. Better communication requires that archaeologists address the problems associated with planning, implementation, and analysis of archaeogeophysical survey.