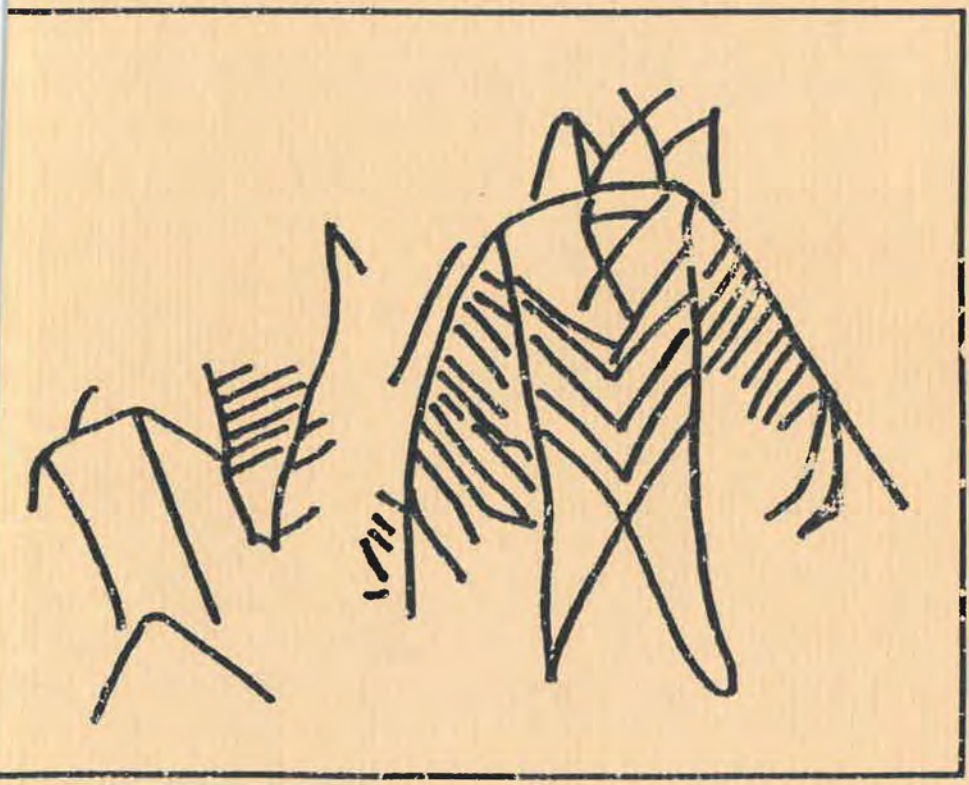
MIDWEST ARCHAEOLOGICAL CONFERENCE

34th ANNUAL MEETING

PROGRAM AND ABSTRACTS



October 13-15, 1989
Iowa City, Iowa

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Conference Organizing Committee

William Green, Stephen C. Lensink, Debby J. Zieglowsky-Baker

Support Staff

John Cordell, Linda Forman, Linda Langenberg, Carl Merry, Catharina Schrader

Support and funding provided by these co-sponsors:

Office of the State Archaeologist, University of Iowa
Iowa Archeological Society
Department of Anthropology, University of Iowa
Iowa City and Coralville Convention and Visitors Bureau
Museum of Natural History, University of Iowa
Department of Geology, University of Iowa
Iowa Quaternary Studies Group, University of Iowa
Charles R. Keyes Chapter, Iowa Archeological Society

Thanks also to:

Department of Anthropology, University of Wisconsin – Milwaukee

Cover Illustration: "Thunderbird" petroglyph panel, Indian Cave site (13AM84), near Lansing, Iowa. From a 1969 charcoal tracing by Marshall McKusick. See J. Tiffany, *Iow Archeological Society Newseltter* 94:7-11 (1979).

KCF
Conference
MAC
1989

GENERAL INFORMATION

Registration. The registration table will be open at the following times and places: from 1:00 until 5:00 p.m. on Friday, October 13 in the entryway to the Main Lounge of the Iowa Memorial Union; from 8:00 a.m. until 2:00 p.m. on Saturday, October 15 in the Lower Lobby of the Holiday Inn; and from 8:00 to 9:00 a.m. on Sunday, October 15 in the Lower Lobby of the Holiday Inn.

Parking. On Friday afternoon, parking will be available in the ramp directly east of the Iowa Memorial Union (Madison Street). Other campus-area ramps are also available. For Saturday and Sunday, parking is available in the ramp adjacent to the Holiday Inn (Burlington and Dubuque Streets) and is free for registered guests of the Holiday Inn.

Exhibits. Books and other exhibits will be displayed in the Lucas Room at the Holiday Inn from 8:00 a.m. to 4:45 p.m. on Saturday and from 8:00 a.m. until 12 noon on Sunday. Some materials also will be displayed near the registration table on Saturday and Sunday.

Business Meeting. The location of the 1990 Midwest Archaeological Conference will be discussed at a short business meeting at 11:30 a.m. on Sunday in Amos Dean C-D, following the conclusion of the Oneota symposium.

No smoking. Smoking during sessions is not permitted.

Slide Screening. A projector will be available for speakers who wish to check their slides from 8:00 to 10:15 a.m. and 4:15 to 5:00 p.m., Saturday, Amos Dean B.

Information Table. An information table will be available near the registration table throughout the conference for messages, maps, and bus schedules and information on the program, parking, restaurants, and points of interest in the Iowa City area.

SPECIAL EVENTS

Reception and Open House. Wine, cheese, etc.; sponsored by the Iowa Archeological Society. Iowa Hall Gallery, Museum of Natural History. Macbride Hall. Friday, October 13, 5:00-7:00 p.m.

Zooarchaeology Open House. Trowbridge (Geology) Hall, second floor. Guided tour starts at 5:30 p.m. Saturday, room 231. Browsing until 6:30.

Reception and Cash Bar. Holiday Inn, Amos Dean A-B, 7:00 to 10:00 p.m., Saturday.

PROGRAM AT A GLANCE

Friday Afternoon, October 13

[1]	Plenary Session	Iowa Memorial Union, Main Lounge	1:30-5:00
	Reception and Open House	Iowa Hall Gallery, Museum of Natural History; Macbride Hall	5:00-7:00

Saturday Morning, October 14

[2]	Recent Advances in Iowa Archaeology	Holiday Inn Amos Dean A	8:30-12:00
[3]	U of the Lake II	Holiday Inn Amos Dean C-D	8:30-12:00
[4]	Mississippian and Related Research	Holiday Inn Amos Dean B	10:30-12:00

Saturday Afternoon, October 14

[5]	Current Investigations of Midwestern and Canadian Rock Art	Holiday Inn Amos Dean C-D	1:30-5:10
[6]	Methodology and Applications	Holiday Inn Amos Dean B	1:30-4:15
[7]	U of the Lake II Roundtable	Holiday Inn Amos Dean A	1:30-3:00
[8]	Woodland Research	Holiday Inn Amos Dean A	3:15-5:00
	Zooarchaeology Open House	Trowbridge Hall Second Floor	5:30
	Reception and Cash Bar	Holiday Inn Amos Dean A-B	7:00-10:00

Sunday Morning, October 15

[9]	Oneota and Related Late Prehistoric Cultures	Holiday Inn Amos Dean C-D	8:45-11:30
[10]	Paleo-Indian and Archaic Cultures	Holiday Inn Amos Dean B	9:00-10:00
[11]	Historical Archaeology	Holiday Inn Amos Dean B	10:15-11:15
[12]	Business Meeting	Holiday Inn Amos Dean C-D	11:30

FRIDAY AFTERNOON — OCTOBER 13, 1989

[1] Plenary Session: NATIVE AMERICAN AGRICULTURE: THE ORIGINS, DEVELOPMENT, AND SIGNIFICANCE OF PREHISTORIC FARMING

Main Lounge, Iowa Memorial Union
Organizer: William Green

1:30 William Green; Midwestern Perspectives on Agricultural Origins, Development, and Significance

1:45 Richard A. Yarnell; Investigations Relevant to the Native Development of Plant Husbandry in Eastern North America: A Brief and Reasonably True Account

2:10 David L. Asch; Prehistoric Plant Husbandry in West-Central Illinois: An 8000-Year Perspective

2:35 Gayle J. Fritz; In Color and in Time: Prehistoric Ozark Agriculture

3:00 Jane E. Buikstra; A Carbon Isotopic Perspective on Dietary Variation in Late Prehistoric Western Illinois

3:25 Neal H. Lopinot; A Crop of New Data on the Cahokian Polity

3:50 James P. Gallagher and Constance M. Arzigian; A New Perspective on Late Prehistoric Agricultural Intensification in the Upper Mississippi River Valley

4:15 Sissel Johannessen; Food and Society in the Central Mississippi Valley

RECEPTION AND OPEN HOUSE

5:00 – 7:00 Sponsored by the Iowa Archeological Society; hosted by The University of Iowa Museum of Natural History. Iowa Hall Gallery, Macbride Hall.

SATURDAY MORNING — OCTOBER 14, 1989

[2] General Session: RECENT ADVANCES IN IOWA ARCHAEOLOGY (Fall 1989 Meeting of the Iowa Archeological Society)

Holiday Inn, Amos Dean A
Chairperson: Dale R. Henning

8:30 William Green; A Review of Recent Public Education Programs in Iowa Archaeology

8:45 K. Kris Hirst; "Fort" Robinson, Iowa, or John Green Meets the Young and the Restless

9:00 John Bower, William M. Cremin, and Sheila Hainlin; The Buchanan Site (13SR153): Preliminary Results of Excavation at a Stratified Site in Central Iowa

9:15 Mark L. Anderson and David B. Richardson; Archaeology and Geomorphology of the Tama Levee Project

9:30 [Break]

9:45 David B. Richardson and Mark L. Anderson; Archaeological - Geomorphological Investigations at the Coralville Reservoir, Johnson County, Iowa

10:00 Denise C. Hodges; Human Skeletal Remains from the Pine Creek Mounds, Muscatine County, Iowa: A Demographic and Health Analysis

10:15 Shirley J. Schermer; Analysis of Burials from a McGregor Focus/Phase Mound: Northeast Iowa Hopewell

10:30 Timothy S. Hare; Functional Analysis of Utilized Flakes from a Nebraska Culture Site at Glenwood, Iowa

10:45 – 12:00 Roundtable; Iowa artifact examination; IAS Board of Directors and business meeting

[3] Symposium: U OF THE LAKE II: ARCHAEOLOGICAL RESEARCH IN THE LAKE MICHIGAN REGION

Holiday Inn, Amos Dean C-D
Co-organizers: Rochelle Lurie and Robert J. Jeske

8:30 Gary Ellis; An Evaluation of Behavioral Correlates In Indiana Shipwrecks

8:45 Elizabeth Benchley; A Settlement Model for Prehistoric Sites in the Inland Areas of Northern Wisconsin

9:00 Rochelle Lurie; Survey and Testing in the Upper Grant Creek Drainage on the Joliet Army Ammunition Plant

9:15 Richard B. Johnson; A Large Scale Testing Project in Lake County, Illinois

9:30 M. Catherine Bird; Upper Mississippian Langford Tradition Structures

9:45 Robert J. Jeske; So Close, Yet So Far Away: Northeast Indiana and the Midwest

10:00 James R. Jones III; Acculturation at Historic Aboriginal Settlements in Tippecanoe County, Indiana: The Artifactual Evidence

10:15 [Break]

10:30 William M. Cremin; Researching the "Void" Between History and Prehistory in Southwestern Michigan

10:45 Elizabeth E. Garland; The Elam Site: A Multicomponent Woodland Site on the Lower Kalamazoo River in Southwestern Michigan

11:00 Lewis Wisser; Analysis of the Lithic Assemblage from the Elam Site, 20AE195, Southwestern Michigan

11:15 Bryan Deroo and Kathryn E. Parker; Botanical Remains from the Late Woodland Component at the Elam Site, a Multicomponent Woodland Campsite in Southwestern Michigan

11:30 Gregory R. Walz; Preliminary Analysis of Macroplant Remains from Schwerdt, An Early Fifteenth Century Encampment in the Lower Kalamazoo River Valley

11:45 Daniel Goatley; Analysis of Lithic Assemblages from the Schwerdt Site, an Upper Mississippian Sturgeon Fishery on the Lower Kalamazoo River

[4] General Session: MISSISSIPPIAN AND RELATED RESEARCH

Holiday Inn, Amos Dean B
Chairperson: James M. Collins

10:30 C. Wesley Cowan and Sandra Dunavan; Ft. Ancient Household Economy in Southwestern Ohio

10:45 Kit W. Wesler; Ceramics, Chronology, and Horizon Markers at Wickliffe Mounds

11:00 Jacqueline A. Ferguson; Remote Sensing, Surface Artifacts, and Community Patterns at the Common Field Site, Missouri

11:15 George R. Holley, Rinita Dalan, Phillip A. Smith, and Neal H. Lopinot; Recent Investigations at the Central Plaza, Cahokia Mounds

11:30 Derrick J. Marcucci; Economic Specialization and Regional Symbiosis: A New Perspective of Mississippian Craft Specialization

11:45 Robert F. Sasso; Context and Implications of Archaeological Research in the Coon Creek Drainage in Western Wisconsin

SATURDAY AFTERNOON — OCTOBER 14, 1989

[5] Symposium: CURRENT INVESTIGATIONS OF MIDWESTERN AND CANADIAN ROCK ART

Holiday Inn, Amos Dean C-D
Organizer: Iloilo M. Jones-Delo

1:30 Jack Steinbring; Spatial Analysis on a Northern Rock Painting Site

1:50 Jeffery A. Behm; The Krug Petroforms (47-FD-274), Fond du Lac County, Wisconsin

2:10 Cynthia Stiles-Hanson; Rock Art Motifs of the Driftless Area

2:30 Lori A. Stanley; Revisiting Four Rock Art Sites in the Driftless Area of Northeastern Iowa: Paint Rock, Indian Cave, Burke's Shelter, Blake's Crevice

2:50 David Lowe; Vanishing Images

3:10 John White; The Use of Native Language Texts in the Identification of Culturally Significant Localities and Prehistoric Pictographic Representations

3:30 Jerome Jacobson; The Peripatetic Piasa

3:50 Iloilo M. Jones-Delo; The Pike County Piasa Petroglyph Site

4:10 Victoria Dirst; Rock Art at Roche A Cri

4:30 Maurice P. Lanteigne and Karen S. Nachtigall; The Manitoba Rock Paintings: Evidence for Territorial Demarcation

4:50 Maurice P. Lanteigne and Karen S. Nachtigall; The Manitoba Rock Paintings: Conservation and Recording Status

[6] General Session: METHODOLOGY AND APPLICATIONS

Holiday Inn, Amos Dean B
Chairperson: E. Arthur Bettis III

1:30 James A. Marshall; The Geometric Earthworks of Eastern North America and Lamhatty's Map

1:45 T.S. Weitzel and A.U. Dogan; Plant Food Resources at the Palmer Pines Site (21HB19)

2:00 Robert G. Thompson; Phytolith Analysis of Food Residues in Utilized Ceramics: A Tool for Tracing Paleodiet

2:15 Joyce A. Williams and William R. Iseminger; Experimental Burning of Demonstration Houses at the Cahokia Mounds Historic Site

2:30 [Break]

2:45 Mark Madsen; Chicago Area Archeology; A Century of Successes and Failures in Preserving Archeological Sites and Data in an Expanding Metropolitan Area

3:00 Julieann Van Nest; Late Pleistocene-Holocene Geology and Archeology in the Northern Sny Bottom, Mississippi River Valley, Pike County, Illinois

3:15 John E. Kelly, Bonnie L. Gums, and William I. Woods; The Archaeology of the Dupo-Waterloo Anticline

3:30 Douglas Kullen; The Effectiveness of Five Artifact Recovery Methods at Upland Plowzone Sites

3:45 Julieann Van Nest; Holocene Landscape Evolution and Archeological Site Distributions in Loess-mantled Uplands Between the Mississippi and Illinois Rivers, Pike County, Illinois

4:00 Jim Brown and Mary Beth Trubitt; Archaeology Beneath the Peat in Northern Illinois

[7] Roundtable: U OF THE LAKE II

Holiday Inn, Amos Dean A
Organizers: Rochelle Lurie and Robert J. Jeske

1:30 - 3:00 Discussion and artifact examination; open to all interested researchers working in the Lake Michigan area.

[8] General Session: WOODLAND RESEARCH

Holidy Inn, Amos Dean A
Chairperson: Mary K. Whelan

3:15 Cameron Begg and Thomas J. Riley; Analysis of Marion Thick Ceramics from the Plum Island Site, LaSalle County, Illinois

3:30 William T. Billeck; An Obsidian Ross Point from Prairie du Chien, Wisconsin

3:45 Flora Church; Archaeology Under the Bigtop: One More Middle Woodland Habitation for Ohio

4:00 Howard D. Winters, Eugene Boesch, and Anne-Marie Cantwell; The Baehr Site, Brown County, Illinois

4:15 Jonathan E. Bowen; Erie-401: A Late Woodland Site in Northern Ohio

4:30 Fred A. Finney and Scott B. Meyer; The Late Woodland Effigy Mound Occupation of the Syttende Mai Site, Richland County, Wisconsin

4:45 John Nass, Jr.; Summary of Archaeological Investigations at the Saber Farms, a Multicomponent Prehistoric Site in Ross County, Ohio

ZOOARCHAEOLOGY OPEN HOUSE. Holmes A. Semken, Jr., Organizer. Tour starts 5:30; browsing until 6:30. Paleontology Repository, Trowbridge Hall (Geology Building), 2nd floor, Room 231.

SUNDAY MORNING — OCTOBER 15, 1989

[9] Symposium: ONEOTA AND RELATED LATE PREHISTORIC CULTURES: CURRENT RESEARCH

Holiday Inn, Amos Dean C-D
Organizer: Robert A. Birmingham

8:45 Charles R. Moffat; Recent Research at Oneota Sites in the Des Moines River Valley, Iowa

9:00 Kathryn E. Parker; Oneota Archaeobotany at Lake Red Rock, Southcentral Iowa

9:15 Lucretia S. Kelly; Oneota Faunal Exploitation as Viewed from the Red Rock Area of Central Iowa

9:30 Fred A. Finney; Between Late Woodland and Oneota: The Fred Edwards Site and Middle Mississippians in the Upper Midwest

9:45 Roland L. Rodell; Oneota, Space and Time in the Upper Mississippi Valley

10:00 [Break]

10:15 Clark A. Dobbs; A Revised Interpretation of Culture History and Process at the Red Wing Locality

10:30 Dan Wendt and Clark A. Dobbs; Reevaluation of the Mero (Diamond Bluff) Site Complex

10:45 Robert J. Salzer; New Views on the Origins of Oneota

11:00 David F. Overstreet and John Richards; Some Observations on the Distribution and Relationships of Late Prehistoric Populations in Wisconsin

11:15 Discussant: James B. Stoltman

[10] General Session: PALEO-INDIAN AND ARCHAIC CULTURES

Holiday Inn, Amos Dean B
Chairperson: Stephen C. Lensink

Poster Paper: Toby Morrow; An Early Archaic House Floor in the Lower Illinois River Valley

9:00 Steven R. Ahler; Modoc Rock Shelter Projectile Point Assemblages

9:15 Marla Buckmaster; Surface Indications of Paleo-Indian and Archaic Sites on Silver Lake, Marquette County, Michigan

9:30 Matthew G. Hill; Paleo-Indian and Early Archaic Projectile Points from Silver Mound, Jackson County, Wisconsin

9:45 John F. Doershuk and Judy M. Stevenson; Koster Site Middle Archaic Structure: Macro and Micro Perspectives

[11] General Session: HISTORICAL ARCHAEOLOGY

Holiday Inn, Amos Dean B
Chairperson: Carl A. Merry

10:15 Kent Frank; Spearing Decoys: The Forgotten Artifact

10:30 Floyd Mansberger; In Search of the St. Louis Church: Archaeological Investigations within the Undercroft of the Cathedral of the Assumption, Louisville, Kentucky

10:45 David Walitschek; Late 19th and Early 20th Century Urban Life Explored: Evidence from the Reuben Benjamin House, Bloomington, Illinois

11:00 Carl A. Merry; Historical Archaeology at the Kendallville Flouring Mill

[12] BUSINESS MEETING

Holiday Inn, Amos Dean C-D

11:30

SYMPOSIUM ABSTRACTS

PLENARY SESSION

NATIVE AMERICAN AGRICULTURE: THE ORIGINS, DEVELOPMENT, AND SIGNIFICANCE OF PREHISTORIC FARMING

Organizer: William Green (Office of the State Archaeologist, Iowa)

This session explores the changing relationships between people and plants over the last 8000 years, with an emphasis on midwestern Indian cultures of ca. 1000 B.C. to A.D. 1600. The systems of food production employed by prehistoric Woodland, Mississippian, and Oneota peoples reflect processes of experimentation and diversification that are important in studies of cultural dynamics and that can be of value in the context of current movements toward "sustainable" agriculture.

U OF THE LAKE II: ARCHAEOLOGICAL RESEARCH IN THE LAKE MICHIGAN REGION

Co-organizers: Rochelle Lurie (Northwestern) and Robert J. Jeske (Indiana-Purdue, Fort Wayne)

The second annual U of the Lake conference is designed to explore common research problems encountered by archaeologists working around the southern end of Lake Michigan. These problems include establishing reliable chronologies within regions, designing workable artifact typologies, and defining subsistence and settlement patterns, as well as exploring new methods and techniques for exploring the past. The symposium provides a forum for information sharing among archaeologists working in the four states in two ways: through formal research papers and a more informal workshop, where archaeological material from recent projects may be compared and ideas for coordinating research may be discussed.

CURRENT INVESTIGATIONS OF MIDWESTERN AND CANADIAN ROCK ART

Organizer: Iloilo M. Jones-Delo (Center for American Archeology)

Current studies of rock art sites in the Midwest and Canada are producing a contemporary body of information about use, chronology, and interpretation of images. Papers on Illinois, Iowa, Manitoba, and Wisconsin, sites are presented by researchers from these areas. As a developing and growing field of archaeological investigation, rock art research in the Midwest has become a significant new focus for the gathering of information about past cultures.

ONEOTA AND RELATED LATE PREHISTORIC CULTURES: CURRENT RESEARCH

Organizer: Robert A. Birmingham (State Historical Society of Wisconsin)

This symposium will present site specific information and regional syntheses regarding the origins, evolution, adaptations, and distribution of the Oneota as well as its relationships to other cultural manifestations.

PAPER ABSTRACTS

Ahler, Steven R. (Illinois State Museum) [10]

MODOC ROCK SHELTER PROJECTILE POINT ASSEMBLAGES

Recent morphological and typological analyses of the projectile points from Modoc Rock Shelter have been combined with refined stratigraphic and chronological data obtained from excavations conducted since 1980. The new stratigraphic and chronological sequences are briefly discussed, followed by a presentation of projectile point types/styles/morphological classes associated with specific temporal and/or stratigraphic intervals. These data provide a more precise chronological placement for many common Midwestern point types. The analyses also show little support for the concept that a single point type is exclusively representative of a specific time period or cultural manifestation.

Anderson, Mark L. (Office of the State Archaeologist, Iowa) and David B. Richardson (Donohue and Associates) [2]

ARCHAEOLOGY AND GEOMORPHOLOGY OF THE TAMA LEVEE PROJECT

This project involved the archaeological and geomorphological study of a proposed levee corridor and associated borrow areas for the City of Tama, Tama County, Iowa. Geomorphological tests using backhoe trenches revealed a buried soil within an alluvial fan feature. The buried soil occured from 150 to 160 cm below the current cultivated surface. Archaeological tests using microdebitage analysis indicated the presence of cultural material contained in the buried soil. C14 testing by the University of Wisconsin – Madison yielded a date on the paleosol of 9550 ± 100 B.P. (ca. 7600 B.C.). The cultural material within the buried soil constitutes suggestive evidence of the oldest dated prehistoric site in Iowa.

Asch, David L. (Center for American Archaeology, and Office of the State Archaeologist, Iowa) [1]

PREHISTORIC PLANT HUSBANDRY IN WEST-CENTRAL ILLINOIS: AN 8000-YEAR PERSPECTIVE

This paper outlines the archaeobotanical record of human plant use in west-central Illinois between 8500 BP and 250 BP, in relation to the following themes: (a) plant management as a continuum of relationships from parasitic gathering, to encouragement, and to progressively greater control of a plant's life cycle and biology; (b) management trajectories of major plant-food procurement systems; (c) significance of specialty crops in horticultural development; and (d) discontinuity in regional plant-use trajectories.

Begg, Cameron, and Thomas J. Riley (Illinois, Urbana-Champaign) [8]

ANALYSIS OF MARION THICK CERAMICS FROM THE PLUM ISLAND SITE, LASALLE COUNTY, ILLINOIS

The results of petrographic and microprobe analyses on seven sherds of Marion Thick ceramics recovered from the Plum Island Site in Illinois were compared with Porter's earlier petrographic analysis of samples from the Jean Rita Site of the American Bottom. It was expected that the two separate samples would produce some differences in paste and perhaps in tempering materials. These expectations were not met. All sherds were tempered with crushed igneous rock and a small number of specimens in each sample showed use of grog as a tempering material. It was concluded: 1) that Porter's observation that Marion Thick is a well defined ceramic tradition is correct, 2) that small numbers of sherds showing grog temper in association with igneous rock can be expected over the range of Marion Thick ceramics, and 3) the uniformity of Marion Thick ceramics over a broad area belies the division of Marion Cultures into local phases. It is speculated: 1) either ceramic reproduction at this early stage of the craft in the midwest was rote, or 2) that a small "interaction sphere" occurred in Marion Culture which distributed potters or the ideas of their craft over a large, diffuse territory.

Behm, Jeffery A. (Wisconsin – Oshkosh) [5]
THE KRUG PETROFORMS (47-FD-274), FOND DU LAC COUNTY, WISCONSIN

The Krug Petroforms are located in east-central Wisconsin. Preliminary survey and mapping has identified two separate petroform areas on the top and side of a drumlin. The Area A petroform complex, located in and around a depression on the top of the hill, resembles some of the Medicine Wheels from the Plains. Preliminary mapping has tentatively identified several astronomical alignments associated with the solstice sunrises and sunsets indicating that the Area A petroform complex may have served as a calendrical device. The Area B petroforms, which overlook a spring, consist of a large number of small, highly varied boulder patterns.

Benchley, Elizabeth D. (Wisconsin – Milwaukee) [3]
A SETTLEMENT MODEL FOR PREHISTORIC SITES IN THE INLAND AREAS OF NORTHERN WISCONSIN

A hunter-gatherer settlement model is proposed for prehistoric sites in inland areas of the southern Nicolet National Forest. The model considers potential variability in settlement form and function in relation to seasonal resource distributions. Four site types are proposed, and classes of information expected to be present and absent are discussed. A sample of twelve excavated sites are described using the model. The sites are located along wetlands, interior lakes, streams, and rivers associated with the Oconto River drainage, which empties into Lake Michigan.

Billeck, William T. (Missouri – Columbia) [8]
AN OBSIDIAN ROSS POINT FROM PRAIRIE DU CHIEN, WISCONSIN

A previously unreported Ross type obsidian point was obtained from a mound near Prairie du Chien in the late 19th century by Capt. W. Hall. Documentary evidence suggests the point was most likely obtained from the Flucke Mound Group. Several other obsidian tools from the Mississippi Valley in Iowa and Wisconsin are surveyed. Obsidian tools have only been reported in mortuary contexts in the Middle Woodland period and in non-mortuary contexts in the Late Prehistoric period.

Bird, M. Catherine (Wisconsin – Milwaukee) [3]
UPPER MISSISSIPPIAN LANGFORD TRADITION STRUCTURES

In 1823, an expedition led by Stephen Long crossed the Fox River near Elgin, Illinois. A member of the party, William Keating, wrote ". . . upon this prairie we discovered a number of mounds. . . of these we counted twenty-seven." The reference is to Langford Upper Mississippian dwellings of the Washington Irving site, for which we now have information concerning form (length, width, height), manner and materials of construction, and spatial arrangement. This information supplements data from the 1983-1985 archaeological research at the site. Settlement patterns, population, house form, and structural similarities/differences among several Upper Mississippian sites will be discussed.

Bowen, Jonathan E. (Ohio Archaeological Council) [8]
ERIE-401: A LATE WOODLAND SITE IN NORTHERN OHIO

Erie-401 is located on a small tributary of Hemming Ditch about 5 km south of the mouth of Sandusky Bay of Lake Erie. The main early Younge phase Late Woodland component has been radiocarbon dated to 920±80 B.P. (Beta-31588), 1010±80 B.P.(Beta-31589), and 1270±60 B.P. (Beta-31590). All MASCA corrected ranges overlap between A.D. 900-1000. The excavation of 1800 m^2 revealed three apparent activity areas, one for flint working, one for food processing, and one for food storage. The faunal sample suggests much exploitation of the marshes and open waters of Sandusky Bay to the north.

Bower, John (Iowa State), William Cremin (Western Michigan), and Sheila Hainlin (Iowa State) **[2]**

THE BUCHANAN SITE (13SR153): PRELIMINARY RESULTS OF EXCAVATION AT A STRATIFIED SITE IN CENTRAL IOWA

The Buchanan site (13SR153), located on the outskirts of Ames, Iowa, contains a series of superimposed occupations ranging from Early (?) Archaic to Late Woodland with excellent preservation of macrobotanical and faunal material. Three seasons of excavation have been conducted at the site: 1987, 1988, and 1989. The first consisted of test excavations in various locations while the second emphasized lateral exposure of a Late Woodland component and the third focused on vertical trenching of the Archaic sequence. Preliminary studies of the excavated debris have shed light on culture history, environment, and subsistence-settlement practices.

Brown, Jim and Mary Beth Trubitt (Northwestern) **[6]**

ARCHAEOLOGY BENEATH THE PEAT IN NORTHERN ILLINOIS

In the course of geoarchaeological investigations at the edge of a small marsh-rimmed pond (Sun Lake), located in northern Lake County, Illinois, traces of short-term use of the fossil lake beach were uncovered. Although the sparse assemblage was without diagnostics, the heavily patinated lithics from a stratigraphic position beneath well-developed soils points to considerable age. The paleoenvironmental position at the edge of an open lake indicates that shore line usage pedated the formation of the peats and mucks that have accumulated in the last several millennia.

Buckmaster, Marla (Northern Michigan) **[10]**

SURFACE INDICATIONS OF PALEO-INDIAN AND ARCHAIC SITES ON SILVER LAKE, MARQUETTE COUNTY, MICHIGAN

Recent discoveries of Late Paleo-Indian materials on several inland lakes in Marquette County, Michigan prompted additional surveys in adjacent inland areas. Targeted for a walk-over survey was a reservoir basin located in the county's north central highlands. The exceptionally dry years of 1987 and 1988 resulted in lower water levels which provided an excellent opportunity to survey the exposed reservoir bottom. A survey of selected locations identified a number of Late Paleo-Indian and/or Archaic sites. This data provides further evidence of the early occupation of the Upper Peninsula and suggests that additional evidence of Late Paleo-Indian and Archaic peoples will continue to be discovered in the interior areas of the Upper Peninsula.

Buikstra, Jane E. (Chicago) **[1]**

A CARBON ISOTOPIC PERSPECTIVE ON DIETARY VARIATION IN LATE PREHISTORIC WESTERN ILLINOIS

Analyses of dC13 values, associated in the Midwest with maize consumption, have clarified some issues regarding late prehistoric Illinois diets and called others into question. Archaeological and paleopathological research frequently link maize dependence with the rise of population centers, such as Cahokia, and a deterioration of community health. Carbon isotopic values for Illinois River Valley skeletons are contrasted with newly generated data from skeletons from Mound 72 at Cahokia and surrounding sites. Seemingly contradictory data are attributable to the limitations of archaeological measures of prehistoric dietary content, underscoring the importance of secure contextual controls and a sensitivity to interpopulation variation.

Church, Flora (Columbus, Ohio) **[8]**

ARCHAEOLOGY UNDER THE BIGTOP: ONE MORE MIDDLE WOODLAND HABITATION FOR OHIO

Under contract with Archaeological Services Consultants, Inc., mitigation of a southern Ohio site in December 1988 produced the third Hopewell habitation site known from

Ohio. 33-VI-222 appears to be a single component transitional Adena/Hopewell or early Hopewell site on the floodplain of Salt Creek, a major tributary of the Scioto River. This site seems to be a multifunctional habitation or small farming homestead which was tied into a larger social sphere centered on the mound and earthwork complexes of Ross County, Ohio.

Cowan, C. Wesley (Cincinnati Museum of Natural History) and Sandra Dunavan (Michigan) [4]
FT. ANCIENT HOUSEHOLD ECONOMY IN SOUTHWESTERN OHIO

The results of analyses from the excavation of a house and several extramural features from the Schomaker site, a Ft. Ancient village in the Lower Great Miami Valley, provide a rich basis for analyzing household economy in the 13th to 15th centuries in southwestern Ohio. Intrasite and interregional comparisons of ceramic, subsistence, and village patterning are discussed, and their implications for understanding the development of the regional system are examined.

Cremin, William M. (Western Michigan) [3]
RESEARCHING THE "VOID" BETWEEN HISTORY AND PREHISTORY IN SOUTHWESTERN MICHIGAN

The Upper Mississippian Berrien Phase (ca. A.D. 1400-1600) is well established for the St. Joseph and Kalamazoo river valleys of southwestern Michigan. There follows a brief hiatus in the archaeological record, reflecting warfare and consequent emigration to northeastern Wisconsin. The St. Joseph enters history as the "River of the Miamis" and becomes incorporated into the expanding tribal estate of the Potawatomies, who probably occupied the eastern shoreline of Lake Michigan as early as the mid-1400s. The Berrien Phase is summarized and current efforts to resolve the vexing problem created by this "void" in the record are presented.

Deroo, Bryan, and Kathryn E. Parker (Western Michigan) [3]
BOTANICAL REMAINS FROM THE LATE WOODLAND COMPONENT AT THE ELAM SITE, A MULTICOMPONENT WOODLAND CAMPSITE IN SOUTHWESTERN MICHIGAN

The Elam site, located on the Kalamazoo River in southwestern Michigan, has a major Late Woodland component that has been extensively (1360 liters of fill from 48 pit features) sampled by flotation. The occupation is primarily represented by pit features similar to the "roasting pits" found at the Schwerdt, Moccasin Bluff, and Griesmer sites. Many of these features have yielded the charred remains of American Lotus (*Nelumbo lutea*) along with sturgeon bones, but no cultigens are in evidence. Some features were reused as refuse pits and/or surface hearths. Botanical analysis indicates summer and early fall occupation of the site.

Dirst, Victoria (Sturgeon Bay, Wisconsin) [5]
ROCK ART AT ROCHE A CRI

In April, 1989, the Wisconsin Department of Natural Resources conducted a study of the aboriginal rock art at Roche a Cri State Park. The project involved photographic documentation of a complex array of aboriginal petroglyphs and pictographs, most of which lie on an unsheltered rock face. The petroglyphs include abundant "turkey tracks" with four variants, small "thunderbirds," and prominent groups of crescents. The previously unreported pictographs include two apparent representations of "bird dancers."

Dobbs, Clark A. (Institute for Minnesota Archaeology) [9]
A REVISED INTERPRETATION OF CULTURE HISTORY AND PROCESS AT THE RED WING LOCALITY

The Red Wing Locality is a dense concentration of more than 2,000 mounds and earthworks, nine major town and/or village sites, and numerous secondary sites within a 58 square mile area near the head of Lake Pepin in the Mississippi River near Red Wing, MN. Occupied between roughly A.D. 1050 and 1300, the sites in this region possess both Oneota and Mississippian-like (Silvernale) characteristics. Discussions of the Locality and its relationship both to antecedent Woodland cultures and the Middle Mississippian site of Cahokia have tended to focus on one or two artifact classes. A review of inter and intra-site patterning (both mound and habitation) and site catchment suggests that there is evidence for an evolutionary sequence from Late Woodland to Oneota. The Mississippian-like Silvernale Phase may be characterized by distinctive ceramic attributes, differential access to raw materials, and more structured use of space. We hypothesize that Oneota is analogous to Emergent Mississippian in the American Bottom of southwestern Illinois. The Silvernale Phase seems to be contemporary, at least in part, with the Stirling and Moorehead Phases of Cahokia. We argue that the fate of the Silvernale Phase is inextricably linked with the events at Cahokia and ends about A.D. 1250. Oneota cultures, on the other hand, expand westward out of the Mississippi River Valley after this time and develop into a series of regionally distinct cultures.

Doershuk, John F. (Loyola) and Judy M. Stevenson (Northwestern) [10]
KOSTER SITE MIDDLE ARCHAIC STRUCTURE: MACRO AND MICRO PERSPECTIVES

Recent site structure analyses have focused on stone and faunal assemblages from a number of Koster Middle Archaic components. Horizon 8F is of special interest because organized and spatially extensive depositional patterns have been identified that link midden and feature deposits. Procedures used to display and interpret these data are presented. Intensive microdebitage, conjoin, and refitting analyses on chipped stone materials from a single 8F excavation unit supplement the horizon-wide patterns. These perspectives on Koster site structure are shown to be complementary in clarifying past activities and site formation processes.

Ellis, Gary D. (Indiana Division of Historic Preservation and Archaeology) [3]
AN EVALUATION OF BEHAVIORAL CORRELATES IN INDIANA SHIPWRECKS

Systematic survey and evaluation of historic shipwrecks in the Lake Michigan waters of Indiana has produced 14 vessels; one listed on the NRHP, with three others under consideration. To move from structural functional analyses of shipwreck sites toward a cultural behavioral approach, the author utilizes a relational data base focused on site content. The data base permits comparison of a wide range of data categories within and between shipwrecks and has implications for defining behavioral correlates related to 19th and 20th century Great Lakes Marine traditions. Several traditions manifest in the archaeological record of Indiana shipwreck sites are discussed.

Ferguson, Jacqueline A. (Illinois State Museum) [4]
REMOTE SENSING, SURFACE ARTIFACTS, AND COMMUNITY PATTERNS AT THE COMMON FIELD SITE, MISSOURI

Common Field is a fortified Mississippian town and mound site located in the Mississippi River flood plain near Ste. Genevieve, Missouri. In 1979 a flood removed several decimeters of topsoil, exposing complete vessels, articulated burials, feature stains, and charred posts on the new surface. Data from remote sensing and controlled surface collections provide information on community patterns. There is a significant, positive association between pottery density and large, rectangular feature stains on aerial

photographs, which suggests that these stains are residential structures. Spatial distributions of the inferred structures indicate that houses may have been arranged in compounds.

Finney, Fred A. (Wisconsin – Madison) **[9]**
BETWEEN LATE WOODLAND AND ONEOTA: THE FRED EDWARDS SITE AND MIDDLE MISSISSIPPIANS IN THE UPPER MIDWEST

The Fred Edwards site (47Gt377) is a late prehistoric agricultural village in southwest Wisconsin dating to A.D. 1050-1150. Three excavation seasons at the site revealed 163 features, including structures and pits arranged around a plaza, with a palisade surrounding the village. The features represent a single component occupation of typologically Late Woodland and Middle Mississippian remains. The ceramic assemblage has two significant aspects. First, there is a virtually unique blend of Late Woodland and Middle Mississippian in the assemblage. Second, the nonlocal character of certain ceramics point to outside sources. One demonstrated source is the Late Woodland Hartley phase of northeast Iowa.

The known external contacts for the Fred Edwards site are represented by a wide range of exotic artifacts and/or raw materials, non-local ceramic vessels, and non-local chert types. These culture contacts extend to the north, west, and south in the Upper Midwest and involve Late Woodland, Middle Mississippian, and perhaps eastern Plains peoples. Active participation by the Fred Edwards site inhabitants in a widespread exchange network, possibly Cahokia-inspired, is implied by the exotics. Galena and/or deer hides are assumed to have been the local contributions to the network. Various forms of cultural change among many Upper Midwest peoples is one expected result of these contacts.

Finney, Fred A., and Scott B. Meyer (Wisconsin – Madison) **[8]**
THE LATE WOODLAND EFFIGY MOUND OCCUPATION OF THE SYTTENDE MAI SITE, RICHLAND COUNTY, WISCONSIN

In 1989 the authors tested a small Effigy Mound habitation site near Richland Center, Wisconsin. Investigations at the Syttende Mai (47-Ri-190) site included controlled surface collection, hand-excavated test units, and a machine excavation unit. We excavated 17 features during the work. The features represent a Late Woodland Effigy Mound occupation. Specifically, they can be related to a late Keyes phase affiliation of ca. A.D. 950-1100. The presence of 17 intact Effigy Mound features at this site is considered to be highly significant. Such remains are rare in a non-mortuary context and are virtually unknown between Madison and Prairie du Chien in Wisconsin. The site is notable for an association of Madison Cord Impressed and Aztalan Collared ceramics. Our paper will describe the artifacts, community organization, and subsistence data from the Syttende Mai site.

Frank, Kent (Des Moines, Iowa) **[11]**
SPEARING DECOYS: THE FORGOTTEN ARTIFACT

The spearing decoy of the aboriginal tribes of northern regions of North America was an important survival adaptation which helped sustain the people in hard times for hundreds of years. Yet, this unique and creative artifact has been largely overlooked by archaeologists, museums, and historians. The purpose of this paper is two-fold: 1) to acquaint archaeologists with this overlooked artifact, and 2) to explore the origins of the innovation. The origins of spearing decoys are obscure. It is believed by some researchers that the technique originated in eastern Asia and that it was brought to North America between 1000-3000 years ago and subsequently adopted by Indian tribes. It will take much research and a more careful scrutiny of materials in the northern states and Canada if the answer is to be found.

good paper - explains shell fish "lure" from Glenwood site - em

Fritz, Gayle J. (Michigan) [1]
IN COLOR AND IN TIME: PREHISTORIC OZARK AGRICULTURE

Desiccated plants from dry Ozark rockshelters, excavated in the 1920s and 1930s, are renowned for their excellent preservation but bemoaned for poor temporal control. Recent direct radiocarbon dating of key specimens, many from incontrovertible storage context, established a 2500-year sequence of precontact agriculture paralleling the Midwestern pattern of heavy native seed crop production followed by maize intensification. The significance of these collections lies both in their exhibition of changes through time in seed color, size, and micromorphology and in their exemplification of agricultural systems outside the major river valleys.

Gallagher, James P., and Constance M. Arzigian (Mississippi Valley Archaeology Center, Wisconsin – La Crosse) [1]
A NEW PERSPECTIVE ON LATE PREHISTORIC AGRICULTURAL INTENSIFICATION IN THE UPPER MISSISSIPPI RIVER VALLEY

This paper examines the current definitions of and approaches to agricultural intensification and attempts to apply them to late prehistoric agriculture in the Upper Midwest. Agricultural intensification in this region is viewed as concomitant with the exploitation of a broad resource base. Data from Oneota habitation and ridged field sites in the La Crosse, Wisconsin area are used to document this pattern. It is argued that one consequence of this strategy in general and the construction of ridged fields in particular, is to reduce risk and increase security rather than to increase production, the more widely accepted result of intensification.

Garland, Elizabeth E. (Western Michigan) [3]
THE ELAM SITE: A MULTICOMPONENT WOODLAND SITE ON THE LOWER KALAMAZOO RIVER IN SOUTHWESTERN MICHIGAN

Elam is a non-stratified site situated on a low terrace above the Kalamazoo River some 40 river kilometers from Lake Michigan. Principal occupations at the site occurred during the Early and Late Woodland periods. Late Woodland ceramics reflect intensive use of the site from A.D. 1200-1500 by groups who hunted, fished, and gathered. During this period shell tempering and Oneota vessel shapes appear as minor but significant elements in the ceramic inventory. Radiocarbon dating at Elam and other regional sites permits sequencing of ceramic types with some reliability. A tentative ceramic-chronological framework is presented.

Goatley, Daniel (Western Michigan) [3]
ANALYSIS OF THE LITHIC ASSEMBLAGE FROM THE SCHWERDT SITE, AN UPPER MISSISSIPPIAN STURGEON FISHERY ON THE LOWER KALAMAZOO RIVER

The data recovered from two seasons of excavation at the Schwerdt site have provided good evidence that it was occupied over a number of years for the purpose of harvesting spring-spawning sturgeon. Lithic material recovered supports the interpretation that the processing of fish was a major activity of the site's inhabitants. The harvesting and processing of this resource is discussed in relation to other subsistence activities suggested by the lithic assemblage, comparisons are made with other generally contemporaneous site collections, and some thoughts on the Upper Mississippian annual round in the southern Lake Michigan area are offered.

Green, William (Office of the State Archaeologist, Iowa) [1]
MIDWESTERN PERSPECTIVES ON AGRICULTURAL ORIGINS, DEVELOPMENT, AND SIGNIFICANCE

This paper introduces the Plenary Session entitled "Native American Agriculture: The Origins, Development, and Significance of Prehistoric Farming." Interest in sustainable and

diversified agricultural systems is growing among Midwesterners and others concerned about resource degradation and depletion. The study of relationships between prehistoric peoples and plants allows placement of such current concerns into a broader historical context. Archaeological data are the only sources of information on prehistoric midwestern farming, in terms of identifying both the crops (including extinct varieties) and the modes of production that characterized native economic systems. The subjects addressed in this session include archaeological and botanical research methods, reconstructed ethnobotanical patterns and processes in the Midwest, and the cultural concomitants of food production. The record of prehistoric midwestern plant cultivation and domestication is extremely rich and informative, as papers in this session demonstrate by example and through broad, synthetic studies. Understanding past systems of food production and their cultural and environmental significance is a prerequisite in developing strategies of sustainable agriculture and responsible land stewardship.

Green, William (Office of the State Archaeologist, Iowa) [2]
A REVIEW OF RECENT PUBLIC EDUCATION PROGRAMS IN IOWA ARCHAEOLOGY

Public involvement in Iowa archaeology continues at a high level. In 1989, two teachers workshops, a public field school, and a 7th grade archaeology exercise were conducted, providing instruction and training in field and laboratory methods. Archaeology also was an integral part of three nature study field programs. Most public involvement programs were located in southeastern and northwestern Iowa. The success of this year's efforts is assessed in terms of data gathered, number of people involved, and program evaluations by participants. Plans for future programs are discussed.

Hare, Timothy S. (Iowa) [2]
FUNCTIONAL ANALYSIS OF UTILIZED FLAKES FROM A NEBRASKA CULTURE SITE NEAR GLENWOOD, IOWA

Unretouched, utilized flakes from 13ML176 (Mills County, Iowa) were examined using low-power and high-power microwear analysis techniques in conjunction with a replicative experiment. Although only 59 utilized, unretouched flakes were found, several areas of the earthlodge contained relatively homogeneous groupings of tools. With this information, activity areas within the site can be analyzed to determine their functions. Further use of microwear analysis promises even greater success in locating general activity areas.

Hill, Matthew G. (Wisconsin – La Crosse) [10]
PALEO-INDIAN AND EARLY ARCHAIC PROJECTILE POINTS FROM SILVER MOUND, JACKSON COUNTY, WISCONSIN

Paleo-Indian and Early Archaic projectile points from the vicinity of Silver Mound, the source location of Hixton Silicified Sandstone (HSS) in Jackson County, Wisconsin are discussed. This series of carefully provenienced specimens was recovered by avocational archeologist Gary Steele at lithic workshop/habitation areas adjacent to Silver Mound. It includes Clovis/fluted (n=14), Plainview (n=13), Agate Basin/lanceolate (n=37), and other less numerous early point types. Of particular interest are the Clovis/fluted points which represent a sequence which includes points (HSS only) discarded during manufacture (fluting), a discarded HSS specimen having a massive bi-directional impact fracture, a complete HSS Clovis point, and non-local chert Clovis points resharpened to exhaustion that are interpreted to indicate retooling activity by Paleo-Indian peoples at Silver Mound. The Plainview and Agate Basin points follow a similar but somewhat less complex arrangement.

Hirst, K.Kris (Office of the State Archaeologist, Iowa) [2]
"FORT" ROBINSON, IOWA, OR JOHN GREEN MEETS THE YOUNG AND THE RESTLESS

In 1850, Euro-American settlers constructed a temporary stockade near their settlement in Marshall County, Iowa, in response to a perceived threat from native populations returning from forcible removal to Kansas. The incidents occurring with the construction of "Fort" Robinson are illustrative of the uneasy climate of frontier settlement life. Historical documents describing this peculiar incident and recent attempts to relocate the fort site via remote sensing techniques will be discussed.

Hodges, Denise C. (Iowa State) [2]
HUMAN SKELETAL REMAINS FROM THE PINE CREEK MOUNDS, MUSCATINE COUNTY, IOWA: A DEMOGRAPHIC AND HEALTH ANALYSIS

The Pine Creek Mounds, 13MC44, were the focus of exploration by the Davenport Academy of Natural Sciences in the late 19th and early 20th century. In 1914 the Academy excavated three conical mounds uncovering a central grave with multiple interments in each mound. Grave goods recovered from the mounds suggest the structures were Hopewellian. The skeletal remains from the excavations have recently been examined to determine the age, sex, and health status of the sample. This paper presents a demographic and paleopathologic analysis of the remains, describing a probable case of treponemal infection.

Holley, George R. (Southern Illinois, Edwardsville), Rinita Dalan (Minnesota), Phillip A. Smith (Southern Illinois, Edwardsville), and Neal H. Lopinot (Southern Illinois, Edwardsville) [4]
RECENT INVESTIGATIONS AT THE CENTRAL PLAZA, CAHOKIA MOUNDS

A coordinated research program was devised to explore the Central Plaza at the Cahokia Mound site. Prompting this research was the atypical level surface of the Plaza, contrasting the surrounding ridge and swale topography. An electro-magnetic survey revealed, among other anomalies, a prominent feature interpreted as a buried sand ridge. Subsequent probing and excavation have documented that this ridge and adjacent swales have been subjected to anthropogenic modifications of cut and fill. Although clear evidence of basket loading is uncommon, overlying sediments lack natural soil formation characteristics and contain prehistoric artifacts, indicating that at least 75 cm of fill was added to attain the present surface. Borrow pits, of which one was excavated, are also numerous in the plaza, and contain at least 2.2 m of fill. The large scale earth moving necessary to create the Plaza occurred during the terminal stages of the Emergent Mississippian period (A.D. 950-1000) and ranks among one of the largest artificially-created landforms in the eastern United States.

Jacobson, Jerome (Illinois Department of Transportation) [5]
THE PERIPATETIC PIASA

Once seen as a unique pictograph at Alton in the middle Mississippi Valley, the Piasa has been reassessed in recent research and placed in its cultural context. Far from an isolated depiction of a part avian creature of unknown origin, the rock painting of a mythical feline is seen incorporating symbol and style of two major culture areas, with artistic and iconographic connections extending across Asia and deep into the Americas.

Jeske, Robert J. (Indiana-Purdue, Fort Wayne) [3]
SO CLOSE, YET SO FAR AWAY: NORTHEAST INDIANA AND THE MIDWEST

Although its Holocene geology and environment are similar to areas such as northwest Indiana and northeast Illinois, a continental divide has played a dominant role in shaping the culture history of northeast Indiana. Artifact styles, especially ceramics, indicate that the Fort Wayne region is the southwest terminal for a Great Lakes-Ontario related cultural

expression, with little connection to Midwestern groups. In particular, there is neither Upper or Middle Mississippian material found in the region. A preliminary comparison between the Three Rivers area of Fort Wayne and adjoining Midwestern regions is made using surface and excavated data from several sites.

Johannessen, Sissel (Minnesota) **[1]**

FOOD AND SOCIETY IN THE CENTRAL MISSISSIPPI VALLEY

Plant remains from A.D. 500–1000 in the American Bottom are analyzed in the context of a food-system of producing, allocating, storing, preparing, and eating food in a social setting. By considering several data sets related to the changing food-systems, it is apparent that the production aspects, i.e., the agricultural systems, may not change concurrently with other aspects of the total food-system. Changes in ways of eating are apparent in Late Woodland and Mississippi settings in the absence of clear-cut shifts in the agricultural system.

Johnson, Richard B. (Midwest Archaeological Research Services, Inc.) **[3]**

A LARGE SCALE TESTING PROJECT IN LAKE COUNTY, ILLINOIS

In the summer of 1989, thirty-one prehistoric and three historic sites were tested as a part of the Painted Lakes Archaeological Project in Lake County, Illinois. Diagnostic artifacts recovered from the prehistoric sites indicate heavy use of this wetland environment during the Archaic Period. Several sites have yielded undisturbed cultural components, from 50 to 100 cm below ground surface, in low areas bordering the extensive lake shores and marshes in the area. The historic sites are the remains of the late 19th and early 20th century farmsteads.

Jones, James R. III (Indiana Division of Historic Preservation and Archaeology) **[3]**

ACCULTURATION AT HISTORIC ABORIGINAL SETTLEMENTS IN TIPPECANOE COUNTY, INDIANA: THE ARTIFACTUAL EVIDENCE

Different frequencies and proportions of artifact types and functional/activity groupings are found at three historic aboriginal sites in Tippecanoe County, north-central Indiana. These sites—known ethnohistorically—reflect varying degrees of acculturation from least to most acculturated. The three settlements include the Wea village (primarily aboriginal), a Kickapoo-Mascouten occupation (mixed aboriginal and some Euro-American habitation), and Kethtippecanunk (most Euro-American in style). The types and classes of artifacts reflect these degrees of acculturation at the sites and the various classes are discussed and posited as markers or indices of acculturation.

Jones-Delo, Iloilo M. (Center for American Archeology) **[5]**

THE PIKE COUNTY PIASA PETROGLYPH SITE

The Pike County Piasa Petroglyph Site in the Lower Illinois River Valley has been investigated and recorded using new techniques developed by the author. This paper explains the new techniques and provides an interpretation of the Pike County Piasa site. A detailed description of the image and its set of elements is provided. A comparison of the elements present and elements of other images containing many of the same elements indicate that this image is another Piasa.

Kelly, John E., Bonnie L. Gums, and William I. Woods (Southern Illinois, Edwardsville) **[6]**

THE ARCHAEOLOGY OF THE DUPO-WATERLOO ANTICLINE

Since 1976 three surveys have been conducted for the Illinois Department of Transportation in a distinctive portion of the American Bottom region termed the Dupo-Waterloo Anticline. The anticline forms the local watershed between the Mississippi and Kaskaskia river drainages and unlike other divides in the Illinois Uplands appears to have been utilized as a major route of overland transportation through time, including the

historic Kaskaskia Trail. In addition, local chert deposits, springs, and sinkhole ponds provided loci for prehistoric and early historic settlement. The significance of this unique environment to the archaeology of the American Bottom region will be discussed and comparisons will be made with other upland surveys.

Kelly, Lucretia S. (Central Mississippi Valley Archaeological Institute) [9]
ONEOTA FAUNAL EXPLOITATION AS VIEWED FROM THE RED ROCK AREA OF CENTRAL IOWA

This paper will examine recent faunal data from Oneota sites in the Red Rock area of the central Des Moines River Valley. The faunal assemblages have an important bearing on the seasonality of Oneota subsistence in central Iowa. The implications of this will be examined in light of our understanding of Oneota faunal procurement.

Kullen, Douglas (Patrick Engineering, Inc.) [6]
THE EFFECTIVENESS OF FIVE ARTIFACT RECOVERY METHODS AT UPLAND PLOWZONE SITES

Five archeological field techniques were used during Phase I and Phase II Cultural Resource Investigations at six upland plowzone prehistoric sites in northern Illinois. These five methods required variable labor and cost inputs, and produced different artifact recovery rates. The relative effectiveness of these methods is assessed in terms of field time, cost, and artifact recovery.

Lanteigne, Maurice P., and Karen S. Nachtigall (Winnipeg) [5]
THE MANITOBA ROCK PAINTINGS: CONSERVATION AND RECORDING STATUS

An assessment is presented on the current conservation and recording status of Manitoba's rock paintings. It is concluded that a minimum of 33.9% (N=352) of the pictographs are in a critical state of deterioration, a condition which afflicts 98.1% (N=52) of the 53 sites from which reliable damage estimates could be made. 96.2% (N=51/53) of the sites are affected by severe lichenation damage; 58.5% (N=31/53) by a combination of wind, precipitation, and sun erosion; 50.9% (N=27/53) by seepage damage; 43.4% (N=23/53) by vandalism; 43.4% (N=27/53) by exfoliation processes; and 11.3% (N=6/53) by ice-rafting and water submersion. Of the 107 sites inventoried, 26.2% (N=28) have not yet been recorded, and 37.4% (N=40) do not meet International recording standards. Recommendations for the abatement of the deterioration process, and enhancement of recording standards are put forth.

Lanteigne, Maurice P., and Karen S. Nachtigall (Winnipeg) [5]
THE MANITOBA ROCK PAINTINGS: EVIDENCE FOR TERRITORIAL DEMARCATION

Extended sampling of the rock paintings of Manitoba has sustained a previous hypothesis concerning the use of territorial demarcation codes in the rock art of the Nelson River drainage. Ethnographic and linguistic evidence indicates a prehistoric context for a phyletic split between the western Manitoba Rocky Cree and the eastern Manitoba Swampy Cree for this region. The resulting tensions between these two Peoples may have been instrumental in the development of territorial demarcation codes as a population control mechanism. An associated corollary, the identification of genetic deficiency traits in anthropomorphic depictions resulting from a closed genetic pool among the eastern Manitoba Cree, cannot be substantiated at this time. The portrayal of 'mythological' figures, 'vision quest' images, and 'healing' events may be linked to an underlying psychological theme of obtaining and controlling "power." They may also be indicative of the seasonality of rock painting execution. Midewiwin motifs, posited as a relatively late intrusion into the eastern Lake Winnipeg region, are employed as temporal "markers" indicative of major spatial shifts between the eastern Manitoba Cree and Ojibwa cultures.

Lopinot, Neal H. (Southern Illinois, Edwardsville) [1]
A CROP OF NEW DATA ON THE CAHOKIAN POLITY

The rise of the Cahokian polity can be linked to agricultural intensification. Attributes of Late Prehistoric archaeobotanical assemblages indicate the intensification of a pre-existing mixed cropping strategy, but not the introduction of new crops or varieties thereof that increased net productivity. The intensification may be due to the evolution of a more organized system of communal farming labor and of settlement tactics. The demise of Cahokia's regional dominance appears to have resulted from the cumulative effects of this intensive food production system, the demands of a relatively dense local population, forest clearance, and changing climatic and hydrologic conditions, among other factors. Aspects of the archaeobotanical and archaeological records for Cahokia and other sites in the American Bottom are discussed in the context of the rise and demise of the Cahokian polity.

Lowe, David (Wisconsin – Madison) [5]
VANISHING IMAGES

This paper examines the various causes of the destruction of Wisconsin rock art.

Lurie, Rochelle (Midwest Archaeological Research Services, Inc.) [3]
SURVEY AND TESTING IN THE UPPER GRANT CREEK DRAINAGE ON THE JOLIET ARMY AMMUNITION PLANT

Survey conducted on 1010 acres of land in the Grant Creek drainage at the Joliet Army Ammunition Plant located 20 prehistoric sites dating from the Early Archaic to Mississippian periods. Testing at 16 sites revealed that four contained undisturbed cultural deposits, including one Early Archaic component with a feature. Several of the nine historic sites found may be Reeds Corner, one of the earliest pioneer settlements in Will County. The four historic sites tested include a wood cabin built 1820-1825 and three farm complexes occupied 1830-1930. The remaining sites are slated for testing in Fall, 1989.

Madsen, Mark (Glendale Heights, Illinois) [6]
CHICAGO AREA ARCHEOLOGY; A CENTURY OF SUCCESSES AND FAILURES IN PRESERVING ARCHEOLOGICAL SITES AND DATA IN AN EXPANDING METROPOLITAN AREA

One hundred years ago, Albert Sharf's Map of Archeological Sites in the Chicago Area would have been the best guide in pinpointing areas for preservation as park lands. Unfortunately, few of the sites within the city limits were ever preserved. Today, the State Archeological Survey is our best guide for pinpointing new areas for preservation in the expanding suburbs. Unfortunately, current governmental budget deficits and rapidly-increasing valuation of land near scenic river-front property makes future acquisitions of the best sites very costly. This presentation will deal with the importance of reporting sites to the Archeological Survey, the importance of better funding for the Archeological Survey so that information can be readily sent to municipal planners, the importance of developing new tax incentive legislation for preserving archaeological sites, and the proper maintenance of a site once it has become a park or part of a development.

Mansberger, Floyd (Fever River Research) [11]
IN SEARCH OF THE ST. LOUIS CHURCH: ARCHAEOLOGICAL INVESTIGATIONS WITHIN THE UNDERCROFT OF THE CATHEDRAL OF THE ASSUMPTION, LOUISVILLE, KENTUCKY

Located within downtown Louisville, the Cathedral of the Assumption has been a focal point of Catholicism in Kentucky for over 130 years. Currently within the planning stages of a major restoration, the congregation wanted to assess the potential of subsurface resources within the basement of the structure prior to initiating construction. Oral tradition suggested that the 1849/52 Cathedral was built around the earlier (1830) St. Louis Church,

potentially preserving remains of the earlier structure. Excavations conducted by Fever River Research during the summer of 1989 indicate that the remains of at least four circa 1830 to 1850 buildings have survived within the basement of the Cathedral. The high artifact density associated with these 1830's structures clearly suggests an association with the Sisters of Charity of Nazareth, a benevolent organization that founded an orphanage, school, and hospital during the mid 1830's. These excavations emphasize the excellent preservation of significant 19th century remains within an often overlooked urban environment.

Marcucci, Derrick J. (Louis Berger and Associates, Inc.) [4]
ECONOMIC SPECIALIZATION AND REGIONAL SYMBIOSIS: A NEW PERSPECTIVE OF MISSISSIPPIAN CRAFT SPECIALIZATION

The definition and importance of craft and economic specialization are summarized. A brief review of previous researchers' conceptions of Mississippian craft specialization is presented. This paper argues that researchers have attempted to document Mississippian economic specialization by focusing on problematic production types and specialized tools recovered from mixed deposits rather than an economic system. A type of utilitarian tool production in Cahokia's hinterlands is discussed as an example of a more productive line of inquiry. This production transcended the household level and demonstrates a complex system of organization that consolidated localized raw material and integrated products over the expansive Mississippian sphere of interaction.

Marshall, James A. (Schaumberg, Illinois) [6]
THE GEOMETRIC EARTHWORKS OF EASTERN NORTH AMERICA AND LAMHATTY'S MAP

Earthworks in the form of circles, ellipses, squares, rectangles, and parallel walls constructed between 400 B.C. and 400 A.D. in eastern North America bear great stylistic resemblance to historic maps produced by Native Americans between 1607 and 1750 and may therefore explain some of the purpose of the earthworks.

Merry, Carl A. (Office of the State Archaeologist, Iowa) [11]
HISTORICAL ARCHAEOLOGY AT THE KENDALLVILLE FLOURING MILL

Site 13WH228, the Kendallville Mill, consists of a ca. 1867-1925 flouring mill building foundation, a 1,263 ft (385 m) millrace, and dam remains along the Upper Iowa River in the village of Kendallville, Winneshiek County, Iowa. Archaeological investigations conducted in 1988 were designed to document the construction of the millrace and recover data relevant to its use, repair, and abandonment. Archival and oral history research recorded documentation concerning the site's settlement history and the social and economic contexts of flour and feed milling in Kendallville. An archaeological cross-section trench spanning the millrace recorded complex stratigraphic relationships and formation processes illustrating early and late phases of millrace construction, channel re-excavation, and subsequent infilling.

Moffat, Charles R. (American Resources Group, Ltd.) [9]
RECENT RESEARCH AT ONEOTA SITES IN THE DES MOINES RIVER VALLEY, IOWA

Three Oneota sites at Lake Red Rock, an Army Corps of Engineers Reservoir on the Des Moines River, were investigated recently. Excavation of the Wildcat Creek village site (13MA209), radiocarbon dated from A.D. 1170±70 to A.D. 1550±60, uncovered five structures and 148 pit features, including 32 deep storage pits. The two other sites are large flood plain camps. The most extensively investigated camp, the fourteenth century Dawson site (13MA207), contained 37 features, mostly fire pits and hearths. Ceramics, primarily trailed jars, lithic artifacts, and subsistence data, were abundant at both sites and provide new information on central Iowa Moingona Phase Oneota.

Morrow, Toby (Center for American Archeology) [10]
AN EARLY ARCHAIC HOUSE FLOOR IN THE LOWER ILLINOIS RIVER VALLEY [POSTER PAPER]

A semi-circular house floor about 2.5 meters in diameter was found in Horizon 2, a ca. 9500 year old Thebes component at Twin Ditch. When clearing the sterile sand off of the Horizon 2 paleosol, a very conspicuous level depression was found with a small mound of soil adjacent. Seven postmolds were found, spaced at about 50 cm intervals, which very closely followed the outline of the depression. It appears that only about one-half of the structure was excavated.

Nass, John, Jr. (Archaeological Services Consultnats, Inc.) [8]
SUMMARY OF ARCHAEOLOGICAL INVESTIGATIONS AT THE SABER FARMS, A MULTICOMPONENT PREHISTORIC SITE IN ROSS COUNTY, OHIO

In 1988, archaeological data recovery was completed at the Saber Farms site, a multicomponent prehistoric site situated on a slight rise on the floodplain of the Scioto River. Although the investigations were confined to a 5 m wide east-west trending AT&T right-of-way considerable data was retrieved. Excavations identified a 5-20 cm thick midden containing Late Archaic, Early and Late Woodland artifacts and 24 pit features. This paper provides a summary of the analysis of the Saber Farms site including the radiocarbon assays, palaeobotanical analysis, microwear analysis, and preliminary conclusions.

Overstreet, David F. (Great Lakes Archaeological Research Center), and John Richards (Wisconsin – Milwaukee) [9]
SOME OBSERVATIONS ON THE DISTRIBUTION AND RELATIONSHIPS OF LATE PREHISTORIC POPULATIONS IN WISCONSIN

There is little information that indicates close interaction between Oneota populations and those associated with the Late Woodland and Mississippian culture during the late prehistoric era in Wisconsin. In contrast, a considerable number of contexts occur that suggest a rather intimate association between Late Woodland and Mississippian groups. This paper explores the thesis that Mississippians, likely allied with resident Late Woodland populations, and the Oneota both entered Wisconsin some time prior to A.D. 1000. Furthermore, they may have competed for localities best suited to adaptive strategies that focused on exploitation of aquatic habitats and intensive corn horticulture. Ultimately, however, it was the Oneota culture that came to dominate the central and southern Wisconsin landscape. Finally, the distribution of Oneota and Mississippian/Late Woodland habitation sites is viewed as a series of responses to socio-political factors rather than to the effects of changing climatic regimes.

Parker, Kathryn E. (Great Lakes Ecosystems) [9]
ONEOTA ARCHAEOBOTANY AT LAKE RED ROCK, SOUTHCENTRAL IOWA

Carbonized plant materials from three recently excavated Moingona Phase sites at Lake Red Rock show intensive participation in horticulture. Because previous excavations at Oneota sites in the region did not use flotation, subsistence patterns have been poorly understood. Flotation-derived samples from the recently excavated sites include not only corn and beans, but also a wide array of cultivated indigenous seed grains and domesticated oil crops. Wild plants, especially fleshy fruits available on the Des Moines River floodplain, were exploited. Variability between the archaeobotanical assemblages from the three sites is examined in relation to seasonality, site location, and functional specialization.

Richardson, David B. (Donohue and Associates) and Mark L. Anderson (Office of the State Archaeologist, Iowa) [2]
ARCHAEOLOGICAL–GEOMORPHOLOGICAL INVESTIGATIONS AT THE CORALVILLE RESERVOIR, JOHNSON COUNTY, IOWA

The archaeological-geomorphological investigation of the selected lands to be impacted by the Coralville Lake Pool Raise was conducted in August 1988 under the guidance of the U.S. Army Corps of Engineers, Rock Island District. The survey included 1,000 acres where geomorphic surfaces ranged in age from Late Woodfordian (14,000-10,000 B.P.) to Late Holocene (2,200 B.P.-present). The stratigraphic data which included nine radiocarbon sample dates were used to delineate three geomorphic surfaces above the modern floodplain. Stratigraphic investigation was two-fold, focusing on high potential cultural resource areas such as alluvial fan deposits containing paleosols.

Rodell, Roland L. (Mississippi Valley Archaeology Center, Wisconsin – La Crosse) [9]
ONEOTA, SPACE AND TIME IN THE UPPER MISSISSIPPI VALLEY

Ten years ago interpretations of Oneota settlement in the Upper Mississippi Valley were based on data from less than a dozen sites. Over the past decade, however, archaeological investigations in the Upper Mississippi Valley have documented over 100 Oneota sites north of the confluence of the Wisconsin River. The spatial and temporal patterns that have emerged suggest that Oneota settlement was not uniform throughout the valley, but instead favored habitats that would not be seasonally inundated by flooding, provided a variety of seasonally dependable resources, and nutrient rich soils for cultivation. An assay of radiocarbon dates indicates a temporal dichotomy with occupation in the Red Wing and Pepin area earlier than the La Crosse area to the south. The implications of these patterns are examined in this paper.

Salzer, Robert J. (Beloit) [9]
NEW VIEWS ON THE ORIGINS OF ONEOTA

This paper reviews the several models that have been offered to explain the origins of the Oneota tradition. It also assesses new data that emergent Oneota peoples (A.D. 800-1000) may not have been as isolated from contemporary developments in the Mississippi River valley to the south as was previously thought. Attention is focused on iconographic evidence from early Mississippian contexts in the mid-continent and from an important rock art site in southwestern Wisconsin that implies that the origins of Oneota lie in part in trans-ethnic ideologies. A preliminary formulation of a *polygenesis* model is offered for the emergence of the Oneota tradition.

Sasso, Robert F. (Northwestern) [4]
CONTEXT AND IMPLICATIONS OF ARCHAEOLOGICAL RESEARCH IN THE COON CREEK DRAINAGE IN WESTERN WISCONSIN

Recent Oneota research in the Upper Mississippi Valley has provided an informed perspective on subsistence and settlement practices. Following earlier upper Midwest settlement studies, a systematic archaeological survey was conducted in order to identify elements of Oneota settlement in the Coon Creek drainage of western Wisconsin. The context and results of the Coon Valley Survey are described and discussed in light of subsistence-settlement data from the greater La Crosse region. Research results bear significant implications for Oneota regional population density and distribution, the use of several cultivated and wild food species, and the nature of intergroup relations.

Schermer, Shirley J. (Office of the State Archaeologist, Iowa) [2]
ANALYSIS OF BURIALS FROM A MCGREGOR FOCUS/PHASE MOUND: NORTHEAST IOWA HOPEWELL

The National Park Service contracted with the Iowa Office of the State Archaeologist to analyze the human skeletal collection housed at Effigy Mounds National Monument.

Included in this collection were 14 individuals from five of the mounds in the complex known as the Fire Point or Procession Mound Group, 13AM190. Most of the remains and documentation were found from Mound 33 which had been partially excavated in 1931 with additional excavations in 1952. Mound construction, burial treatment, and associated grave goods are representative of the McGregor focus/phase. Demographic and paleopathologic analyses provide additional information for northeast Iowa Hopewell.

Stanley, Lori A. (Luther College, and Bear Creek Archeology, Inc.) [5]
REVISITING FOUR ROCK ART SITES IN THE DRIFTLESS AREA OF NORTHEASTERN IOWA: PAINT ROCK, INDIAN CAVE, BURKE'S SHELTER, BLAKE'S CREVICE

Most known rock art sites in northeastern Iowa's Driftless Area were recorded as a result of three archaeological studies conducted between the 1880s and the early 1970s. Theodore H. Lewis, Ellison Orr, and Marshall McKusick produced locational information, detailed descriptions, and scaled illustrations of several sites. Using these mostly unpublished data, the author is attempting to relocate and evaluate all previously recorded rock art sites in northeastern Iowa. This paper presents a preliminary view of that effort. Four of the revisited sites are described in some detail, including presentation of glyph motifs.

Steinbring, Jack (Winnipeg) [5]
SPATIAL ANALYSIS ON A NORTHERN ROCK PAINTING SITE

The Paimisk Creek Rock Painting Site (Gb Lh-1) near Molson Lake in Northern Manitoba is selected to convey new procedures in the analysis of space utilization. The site occupies a prominent granitic outcropping with a linear disposition of over 100 meters, and contains a minimum of 110 rock paintings on 14 panels. The site consists of sheer walls above deep water, introducing the variable of timed water level fluctuation in relation to iconographic classes. Chronological inferences are also derivative from the iconography of Faces and Panels in relation to the lineality of the site. A cultural and subcultural focus is pursued through archaeoethnological comparisons in the morphology of figures.

Stiles-Hanson, Cynthia (Arlington, Texas) [5]
ROCK ART MOTIFS OF THE DRIFTLESS AREA

Rock art research in the Driftless Area of Wisconsin, Minnesota, Iowa, and Illinois has increased in intensity over the past five years. The concentration of energy has been placed on locating and documenting sites since many of the petroglyphs and pictographs are endangered by human graffiti writers and by the natural deterioration of the sandstone bedrock on which the figures are found. Although over 70 sites have been located thus far, this number represents only a small fraction of the sites believed to exist in the area. Analysis of the age, meaning, and purpose of this prehistoric artifact type cannot be determined from a sample so small; however, certain design styles have emerged. Analysis of the rock art motifs is ongoing and a preliminary index of the designs, their styles, and their geographical location within the Driftless Area is presented.

Thompson, Robert G. (Iowa) [6]
PHYTOLITH ANALYSIS OF FOOD RESIDUES IN UTILIZED CERAMICS: A TOOL FOR TRACING PALEODIET

Opal phytoliths are silicon dioxide bodies produced within and between the cells of some plants. The morphology of these bodies allows them to be useful to varying degrees in determining the plant taxa from which they originated, and their durability makes them useful for archaeology. Phytoliths recovered from food residues in pottery vessels demonstrated that corn and a variety of wild taxa were cooked in them. Ceramics recovered from Glenwood sites in Iowa and archived for over forty years contained food

residues sufficient for these studies, illustrating the utility of this technique for studying archived as well as newly discovered material.

Van Nest, Julieann (Center for American Archeology, and Iowa) [6]
HOLOCENE LANDSCAPE EVOLUTION AND ARCHEOLOGICAL SITE DISTRIBUTIONS IN LOESS-MANTLED UPLANDS BETWEEN THE MISSISSIPPI AND ILLINOIS RIVERS, PIKE COUNTY, ILLINOIS

Hillslope erosion and sediment storage within the uplands are continual geologic processes which have acted through time to produce a landscape composed of a mosaic of surfaces of various ages. Archeological remains occur on surfaces older than the remains, as lag deposits on surfaces younger than the remains, and buried within alluvium and colluvium. Recent geological investigations show that the total area where site burial is possible is much greater than has been assumed in the past. Examples from buried sites from several upland settings illustrate this point. One inescapable conclusion is that the uplands are actually an untapped resource of structurally organized sites which, when more fully explored, undoubtedly will change interpretations of settlement patterns.

Van Nest, Julieann (Center for American Archeology, and Iowa) [6]
LATE PLEISTOCENE-HOLOCENE GEOLOGY AND ARCHEOLOGY IN THE NORTHERN SNY BOTTOM, MISSISSIPPI RIVER VALLEY, PIKE COUNTY, ILLINOIS

Reconstruction of the geologic history of this portion of the valley is based primarily on the integration of subsurface stratification data, radiocarbon dates, and surficial geomorphology. Overall, valley history is dominated by flood-related processes and deposits. The major long-term sedimentological trend has been Holocene floodplain aggradation, including the deposition of terrace veneers. Archaic and Woodland period archeological sites occur in a wide variety of landscape settings and sediment types. Surficial geomorphic features are poor predictors of subsurface stratigraphies, however, because older landforms (ca. >3000 B.P) are differentially preserved, and when present, are buried by extensive deposits of late Holocene alluvium.

Walitschek, David (Bartlett, Illinois) [11]
LATE 19TH AND EARLY 20TH CENTURY URBAN LIFE EXPLORED: EVIDENCE FROM THE REUBEN BENJAMIN HOUSE, BLOOMINGTON, ILLINOIS

This paper will examine the material remains recovered from two subsurface features excavated at the Reuben Benjamin House, Bloomington, Illinois, in the spring of 1977. Benjamin was a prominent Bloomington attorney who achieved some national recognition through an appointment as special counsel to the State Board of Railroad and Warehouse Commissioners. Through this appointment he assisted the Illinois attorney general with the litigation of the warehouse case, *Munn vs. Illinois*, the lead case in a series of cases, argued before the U.S. Supreme Court, now known collectively as the Granger cases. The features, both backyard privy vaults, were abandoned and filled-in with material in the late 1880's and circa 1915 respectively. Material from both features can likely be attributed to the Benjamin tenure at the site, since he resided in the house for over sixty years, from 1856 to his death in 1917. This analysis will explore the functional differences between the two contextual units in terms of: their relative time frame, the household composition, related historical data, and other pertinent documentary evidence.

Walz, Gregory R. (Western Michigan) [3]
PRELIMINARY ANALYSIS OF MACROPLANT REMAINS FROM SCHWERDT, AN EARLY FIFTEENTH CENTURY ENCAMPMENT IN THE LOWER KALAMAZOO RIVER VALLEY

The Schwerdt site (20AE127), an Upper Mississippian sturgeon fishery on the lower Kalamazoo River, represents one aspect of a seasonally oriented economic and settlement

system that operated within the mixed forest environs of southwestern Michigan. While the primary objective of Schwerdt occupants was the exploitation of spring spawning sturgeon, feature and midden context flotation samples reveal that plant remains, especially aquatic tubers, are a substantial portion of the subsistence data from the site. Analysis of macroplant remains is important in "fine tuning" seasonality of occupation, as well as illuminating the scope and nature of subsistence pursuits at the site.

Weitzel, T.S., and A.U. Dogan (Iowa) **[6]**
PLANT FOOD RESOURCES AT THE PALMER PINES SITE (21HB19)

Opal phytoliths are silica bodies deposited in plants. Different species of plants produce phytoliths that are either unique in morphology or have distinct ratios of certain shapes. The Palmer Pines Site (21HB19) is a seasonal hunter/gatherer encampment in west central Minnesota. Excavation recovered a large number of ceramics, suggesting an important role in subsistence practices. Significant amounts of food residues were found in these ceramics. These food residues contain phytolith assemblages that indicate the presence of the inflorescence of wild grasses, including wild rice.

Wendt, Dan, and Clark A. Dobbs (Institute for Minnesota Archaeology) **[9]**
REEVALUATION OF THE MERO (DIAMOND BLUFF) SITE COMPLEX

The Mero (Diamond Bluff) Site complex (47PI2) in Pierce County, Wisconsin, has been the subject of investigations for more than 100 years. Situated on a glacial outwash terrace overlooking the confluence of the Trimbelle and Mississippi Rivers, this site was known to contain several hundred mounds and at least one habitation area. Since 1985, volunteers and staff from the Institute for Minnesota Archaeology have reexamined the site as part of a broader research effort to delineate inter- and intra-site patterning at a variety of Oneota and Silvernale sites within the Red Wing Locality. At the Mero Site Complex, 242 of the 396 mounds mapped in 1887 were relocated. Examination of the distribution of these mounds suggests that there are at least two distinct mound groups within the site complex. Surface reconnaissance and controlled surface pickup have revealed the presence of two large, spatially discrete Mississippian villages and two discrete Late Woodland sites. The debris profiles from these sites are distinctly different. Moreover, the two Mississippian village sites are each bracketed by a cresent-shaped mound group open to the river side of each site, a pattern that has also been identified at all other Mississippian sites within the Locality. Given these data, we argue that the Mero Site complex may best be interpreted as a group of late-prehistoric sites and associated mound groups that span the transition from Late Woodland to Oneota. Moreover, the strong Middle Mississippian presence at these sites poses several interesting problems in evaluating the spatial and temporal relationship between Oneota and the Middle Mississippi-related Silvernale focus within the Red Wing Locality.

Wesler, Kit W. (Wickliffe Mounds Research Center, Murray State) **[4]**
CERAMICS, CHRONOLOGY, AND HORIZON MARKERS AT WICKLIFFE MOUNDS

The Ohio-Mississippi confluence area has become a sharp focus of discussion about late Mississippian developments. The debate is based largely on the presence or absence of artifacts thought to be protohistoric or contact period horizon markers. Late deposits at Wickliffe Mounds (15Ba4) have produced two such artifacts: astragalus dice, and a head effigy pot. Close study of the ceramic sequence and associated radiocarbon and thermoluminescence dates indicate that both "horizon markers" belong to the late prehistoric period of western Kentucky, and that neither can settle debates about protohistoric occupation.

White, John (Sangamon State, and Ancient Lifeways Institute) **[5]**
THE USE OF NATIVE LANGUAGE TEXTS IN THE IDENTIFICATION OF CULTURALLY SIGNIFICANT LOCALITIES AND PREHISTORIC PICTOGRAPHIC REPRESENTATIONS

The author's ongoing research in the reconstruction of a cultural ecology of the Illiniwek has involved the study of surviving native texts. Traditional accounts in the Peoria and Miami languages have described locale-specific events with enough detail to warrant further investigation. In some texts supernatural beings are described in enough detail to be useful in the identification of prehistoric pictographic representations.

Williams, Joyce A., and William R. Iseminger (Illinois Historic Preservation Agency) **[6]**
EXPERIMENTAL BURNING OF DEMONSTRATION HOUSES AT THE CAHOKIA MOUNDS HISTORIC SITE

A wall trench house and a pit house were erected at the Cahokia Mounds Historic Site for public interpretation of Mississippian and Emergent Mississippian prehistoric lifeways. The houses were furnished with food stuffs, ceremonial materials, replicated tools, and ceramics and then burned. Materials and data from the burned wall trench house were gathered immediately. The burned pit house was covered with soil and left for excavation in 5 or 10 years. Details of house construction, the logistics of the preparation for burning, and observations made during and after burnings provide insight into archaeological observations of excavated prehistoric burned structures.

Winters, Howard D. (New York), Eugene Boesch (New York), and Anne-Marie Cantwell (Rutgers) **[8]**
THE BAEHR SITE, BROWN COUNTY, ILLINOIS

The Baehr Site has long been known from the work a century ago of Dr. John Francis Snyder in the burial mounds, but little has been known of the midden areas to the south of the mounds, a generalization that can be applied to most of the regional centers of the Illinois Valley. The excavations of 1987, 1988, and 1989 have shown that much of what was supposedly known about the Baehr Site is incorrect, including the curious anomaly that there is no Baehr Ware at the Baehr Site. Substantial evidence now permits the assigning of both the Baehr and Mound House sites to the Whitehall Phase of the Western Branch of the Havana Tradition. Exotic lithics are present, including obsidian and Knife River Flint. It is also now possible to begin an assessment of the functions of the regional centers, which are much more than mortuary centers as they are frequently designated, and to speculate about the reasons that underly the termination of the Havana Tradition throughout the Prairie Peninsula.

Wisser, Lewis (Western Michigan) **[3]**
ANALYSIS OF THE LITHIC ASSEMBLAGE FROM THE ELAM SITE, 20AE195, SOUTHWESTERN MICHIGAN

Four years of excavation at the Elam site, a multicomponent Woodland site on the Kalamazoo River in southwestern Michigan, has yielded a large quantity of lithic artifacts and debitage. Analysis of chipped stone, rough stone, and ground stone tools from this site indicated that a variety of processing activities were being carried out during the Early and Late Woodland occupations. The presence of non-local lithic materials suggests considerable interaction with both Illinois and Ohio source areas. Comparative analyses between Elam and other regional Late Woodland sites will be presented.

Yarnell, Richard A. (North Carolina – Chapel Hill) **[1]**

INVESTIGATIONS RELEVANT TO THE NATIVE DEVELOPMENT OF PLANT HUSBANDRY IN EASTERN NORTH AMERICA: A BRIEF AND REASONABLY TRUE ACCOUNT

Investigations that have contributed to current understandings and interpretations of the native development of plant husbandry in eastern North America span the past 80 years. This period can be subdivided into at least four segments: 1) 1910 to 1940 was an era when abundant evidence from dry rockshelters was reported, especially by Gilmore and Jones; 2) 1940 to 1960 saw various interpretations made and chronology much improved, but new evidence was nil; 3) 1960 to 1980 again brought abundant new evidence but also qualification, largely because of Struever's introduction of a flotation technique for the recovery of plant remains; and 4) 1980 to the present has been a decade of new techniques, new kinds of data, much more and better data, new sources and kinds of relevant information, and more sophisticated and reliable interpretations.