

**45th Annual
Midwest Archaeological Conference**

October 21-24, 1999

Midwest Archaeological Conference

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Michigan State University
East Lansing, Michigan

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THE UNIVERSITY OF IOWA
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The 45th Annual Midwest Archaeological Conference is coordinated and sponsored by the following units and organizations. Each provided generous direct and/or in-kind support for this conference.

- The Michigan Historical Center
- Michigan State University
- College of Social Science
- Department of Anthropology
- Consortium for Archaeological Research
- MSU Museum
- Center for Great Lakes Culture

Book exhibits will be in the Kellogg Center, rooms 106 & 107. The exhibits will be open from 8:30 am - 5:30 pm on Friday and Saturday.

The MSU Museum is a nice walk from the Kellogg Center, and you are invited to visit the Museum while you are here. The Museum is open from 9 am - 5 pm Monday through Friday, 10 am - 5 pm on Saturday, and 1 - 5 pm on Sunday.

Food and bar service is available in the Kellogg Center, and there are a variety of restaurants and bars in the immediate Lansing/East Lansing area. We have prepared a restaurant guide for you: it is in your registration packet. Please note that there is a slight glitch on Friday evening. We have scheduled a reception and cash bar from 5:30-8 pm in the Big Ten B/C rooms. We planned to suggest that if you wanted a drink later in the evening, you could visit the Spartan Pub in the lower level of the Kellogg Center. Unfortunately, the Spartan Pub is booked on Friday evening for a private party. To compensate for the inconvenience, the Kellogg Center has arranged for the cash bar in Big Ten B/C to remain open Friday evening for our use, so please come back after dinner or stay and drink.

Breaks. There will be a morning coffee break with donuts and juice, and an afternoon break with coffee and sodas. The breaks will be set up outside the Auditorium on Friday morning and Sunday morning, outside the Auditorium and the Lincoln Room on Friday afternoon and Saturday morning, and in Big Ten A on Saturday afternoon.

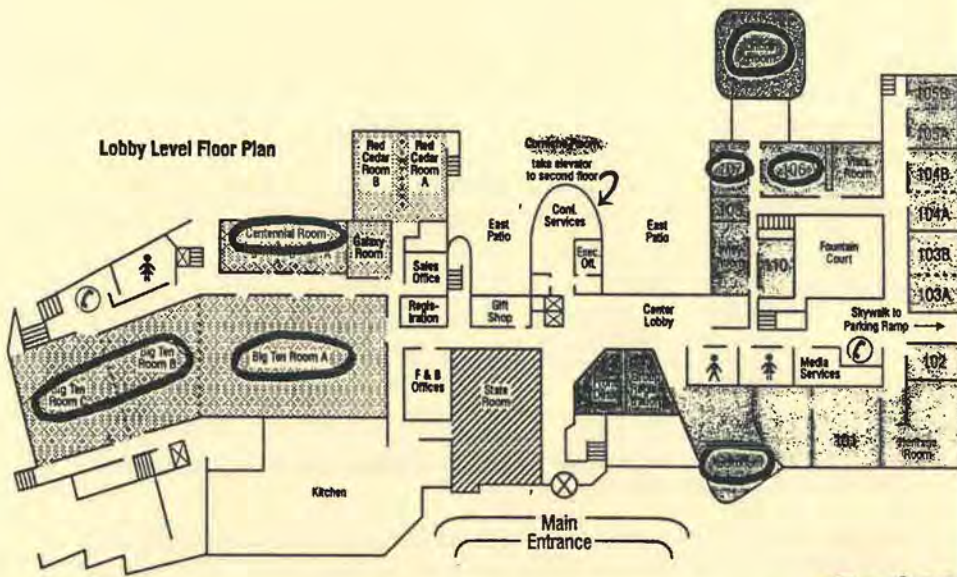
The Midwest Archaeological Conference Annual Business Meeting will be held on Friday from 5-5:30 pm in the Auditorium.

If you have questions or need assistance, please contact Lynne Goldstein, Bill Lovis, or MSU student volunteers. The volunteers have a green "dot" on their name tags.

Logo. The MAC logo we have used for this conference is actually the old Michigan Agricultural College (MSU's early days) logo. We think it is particularly attractive, and since it was no longer being used by anyone ...

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

Lobby Level Floor Plan



Kellogg Hotel & Conference Center
at Michigan State University

Ground Level Floor Plan



-  Meeting Rooms
-  Banquet Areas
-  Eating Areas
-  Front Desk
-  Elevators
-  Men's Room
-  Women's Room
-  Telephones

45th Midwest Archaeological Conference
October 21-24, 1999
Michigan State University, East Lansing, MI

THURSDAY

THURSDAY AFTERNOON — Michigan Historical Center, downtown Lansing

Middle Woodland Ceramic Workshop — *preregistration required*

Workshop held at Michigan Historical Center, Archaeology Storage Room, 4th floor

Guided Facilities Tours — 6:15-8:30 pm

Tours will leave every 15 minutes from the 2nd floor elevators

Supper — *preregistration required* — Deli buffet served on second floor. If you are preregistered, you should have a ticket in your registration packet.

NOTE: All activities on Friday, Saturday, and Sunday will be held at the Kellogg Center on the Michigan State University campus

FRIDAY

FRIDAY MORNING — Auditorium

Archaeology in the Upper LaCrosse River Valley: The Fort McCoy Military Installation

8:30 Ryan Howell (Fort McCoy Archaeology Laboratory), Stephen Wagner (Fort McCoy Archaeology Laboratory), and Andrew Sewell (Fort McCoy Archaeology Laboratory)
Fort McCoy Cultural Resource Management: Total Force Archaeology

8:50 Stephen Wagner (Fort McCoy Archaeology Laboratory)
Fort McCoy Archaeology: A Brief Chronology of Material Cultures

9:10 Ryan Howell (Fort McCoy Archaeology Laboratory)
Lithic Procurement and Lithic Resources Use Patterns in the Upper LaCrosse River Valley: A Preliminary Study

9:30 Andrew Sewell (Fort McCoy Archaeology Laboratory)
The Historical Archaeology of Fort McCoy County, Wisconsin

9:50 Jarred Barrett (Fort McCoy Archaeology Laboratory)
The Not So Buried City Site of Fort McCoy, Wisconsin

FRIDAY MORNING — Auditorium

Regional Perspectives in Midwest Archaeology

10:20 Frank Krist (Michigan State University) and Randall J. Schaetzl (Michigan State University)

Evidence of Wind Directions Circa 11,000 B.P. and The Effects on Paleo Period Settlement in the Upper Great Lakes

- 10:40 George R. Milner (Penn State University)
Population Growth and Subsistence Change in the Eastern Woodlands
- 11:00 Ken Farnsworth (Center for American Archaeology/Univ. of Illinois (ITARP)) and Sarah J Studenmund (UIUC-ITARP)
After the Archaic: A Re-Examination of the Woodland and Late Prehistoric Radiocarbon Database from West-Central Illinois
- 11:20 Sheldon R. BurdIn (Indiana University Southeast & IPFW Archaeology Survey)
The Archaeology of the Falls Area of the Ohio River Valley - Paleoindian Through Woodland Periods (12,000-1,000 BP)
- 11:40 Russell Stafford (Indiana State), Mark Cantin (Indiana State), and Stephen T. Mocas (Indiana State)
A Preliminary Report on the Caesars Archaeological Project in the Lower Ohio River Valley

FRIDAY AFTERNOON — Auditorium

Issues of Ritual and Meaning

- 1:30 William L. Mangold (Indiana Dept. of Natural Resources)
Muck and Marl: Black and White: Middle Woodland Ritual in the Dirt?
- 1:50 Thomas Berres (Northern Illinois University), David M. Stothers (University of Toledo), and Brad W. Bodoh (Northern Illinois University)
Bear Imagery and Ritual in the Midcontinent: Reflections on A. Irving Hallowell's Work
- 2:10 David Mather (University of Minnesota/Loucks & Associates, Inc.)
The Bear's Funeral: Archaeological Expressions of Bear Ceremonialism in Minnesota

FRIDAY AFTERNOON — Auditorium

New Perspectives on the Angel Site (12V61)

- 3:00 Mark Schurr (University of Notre Dame)
Angel Burial Archaeology: Beyond Biology
- 3:20 Cheryl Ann Munson (Indiana University)
Perspectives of the Angel Phase Settlement System
- 3:40 Leslie L. Bush (Glenn Black Lab, Indiana University)
Bicentennial Treasures: Plant Remains from the 1976 Excavations at the Angel Site
- 4:00 Sherri L. Hilgeman (Indiana University - Southeast)
The Angel Site and Its Pottery Assemblage from the Perspective of the Lower Ohio Valley
- 4:20 Stephen Ball (Glenn A. Black Laboratory of Archaeology, Indiana University)
The Continuing Legacy of Glenn Black: Remote Sensing Surveys at the Angel Site

FRIDAY AFTERNOON — Lincoln Room

Analytic Methods and Techniques

- 1:30 Sarah Studenmund (UIUC-ITARP) and Amy K Graham (UIUC-ITARP)
Penstone: Site Function at a Titterington Phase Occupation in West-Central Illinois
- 1:50 James A. Marshall (Schaumburg IL)

- The Poverty Point Topographic Map*
2:10 Peter Cunningham (Michigan State University) and Lynne Goldstein (Michigan State University)
The Use of Geographic Information Systems in the Mapping of Aztalan State Park, Wisconsin
- 2:30 Andrew V. Martin (Ball State University)
A Geographical Information System (GIS) Application for Rockshelter Research
- 2:50 Charlie Foor (Illinois Transportation Archaeological Research Program) and Dan Booth (Illinois Transportation Archaeological Research Program)
Using GPS and GIS Technology in the Evaluation of Early Historic Map Accuracy
- 3:10 BREAK
- 3:30 Sarah Surface (Indiana U.-Purdue at Fort Wayne)
Strategies for Processing Cultural and Natural Materials from Sediments
- 3:50 B. K. Swartz (Ball State University) and John P. Hale (Ball State University)
The Development of an Online Global Rock Art Image Archive
- 4:10 Rebecca F. Sick (Ball State University)
Nonmetric Trait Analysis of the Skeletal Remains from the New Castle Site, Henry Co., Indiana
- 4:30 Michael Higgins (Michigan State University)
Entomology and Death: An Archaeological Perspective
- 4:50 Anne B. Lee (Ohio State University) and Jennifer Pederson (Hopewell Culture National Historic Park)
Locating Middle to Late Woodland Sites with Conditions Conducive to Bone Preservation in the Central Ohio Region: A Predictive Model

ANNUAL BUSINESS MEETING — FRIDAY, 5-5:30 pm — Auditorium

RECEPTION & CASH BAR — 5:30-8:00 pm — Big Ten B/C

Hosted by the MSU College of Social Science, the Department of Anthropology, and the Center for Great Lakes Culture

SATURDAY

SATURDAY MORNING — Auditorium

Movement, Maintenance, and Meals: Historical Perspectives

- 8:30 Steven Kuehn (State Historical Society of Wisconsin)
Life on the Wisconsin Frontier: A Yankee Family Goes West
- 8:50 Kyran V. Kelley (Western Michigan University)
Saugatuck, Michigan: Growth of a Resort Town, 1870 to 1930
- 9:10 Wayne Bischoff (Hemisphere Field Services)
The Archaeology of the Clinton and Kalamazoo Canal: New Insights into 19th Century Michigan Internal Improvement Engineering and Spatial Relationships

- 9:30 Joseph L. Chartkoff (Michigan State University)
The Historic Fishing Community at St. James, Beaver Island
- 9:50 BREAK
- 10:10 Jane Eva Baxter (University of Michigan)
Mr. Lobtinere's Neighborhood: Reassessing Community and Status at Fort Michilimackinac
- 10:30 M. Catherine Bird (Midwest Archaeological Research Services), Carrie Koster (Midwest Archaeological Research Services), and Anne Grauer (Loyola University)
"To be Held in Trust"
- 10:50 William Green (University of Iowa)
Cartographic, Historical, and Archaeological Evidence for Ioway Settlement Locations, ca. 1650-1837

SATURDAY MORNING — Lincoln Room

Woodland Manifestations Through Time and Space

- 8:00 David A. Barondess (Wayne State University), Dean L. Anderson (Michigan Historical Center), Scott G. Beld (Alma College), and Michael J. Hambacher (Great Lakes Research Associates)
A Red Ochre Burial in St. Ignace, Michigan
- 8:20 John P. Hale (Ball State University)
A Bead in Time: An Analysis of the Significance of the Rolled Copper Beads Excavated at the White Site, Mound Three
- 8:40 Scott G. Beld (Alma College)
Arthurburg Hill: An Early Woodland Earthwork Enclosure in central Michigan
- 9:00 Robert J. Salzer (Beloit College)
Middle Woodland in Southern Wisconsin
- 9:20 Jarrod Burks (Ohio State University) and Jennifer Pederson (Hopewell Culture National Historic Park)
From Secular to Sacred: A Comparison of Occupation Debris from Middle Woodland Habitation and Earthwork Sites in Central Ohio
- 9:40 BREAK
- 10:00 Douglas K. Jackson (ITARP/University of Illinois at Urbana-Champaign)
The Yellow Bluffs Site: A Middle Woodland Mound Site located in the Sangamon River Drainage of Central Illinois
- 10:20 R. Criss Helmkamp (Purdue University) and Jessica Javorsek (Purdue University)
A Middle Woodland Ossuary at the West Bedford Site, White County, Indiana
- 10:40 Jarrod Burks (Ohio State University) and William S. Dancey (Ohio State University)
Documenting Terminal Middle Woodland Community Pattern Change in Central Ohio: Aggregated Households at the Strait Site
- 11:00 Sara L. Pfannkuche (University of Illinois, Chicago/ MARS, Inc.)
What Have We Learned: Analysis of the Preliminary Investigations at Shell Midden A at the Macktown Historic Site, Winnebago County, Illinois
- 11:20 Chris Benison (Commonwealth Cultural Resources Group, Inc.) and Sean B. Dunham (Commonwealth Cultural Resources Group, Inc.)

New Evidence for Transitional Middle/Late Woodland Sites in Northeastern Lower Michigan

SATURDAY AFTERNOON — 1:00-4:30 pm — Big Ten A

PLENARY SESSION — Charles E. Cleland: *Odysseus of the Northern Great Lakes*

- 1:00 William A. Lovis (Michigan State University)
Introduction
- 1:10 Janet Brashler (Grand Valley State University) and Margaret B. Holman (Michigan State University)
Middle Woodland Adaptation in the Carolinian/Canadian Transition Zone of Western Lower Michigan
- 1:30 Marla Buckmaster (Northern Michigan University)
Evidence of Prehistoric Horticulture in Michigan's Upper Peninsula
- 1:50 Elizabeth Garland (Western Michigan University)
The Wymer West Knoll Site and Patterns of Regional Interaction During the Mississippian -- Late Woodland Interface, A.D. 1100--1400, in Southwestern Michigan: A Preliminary Statement
- 2:10 Beverly A. Smith (University of Michigan-Flint)
From Household Diets to Regional Exchange Systems in the early Historic Upper Great Lakes
- 2:30 James A. Brown (Northwestern University)
Observations on the Archaeology of Eighteenth Century Fur Trade in the Midwest
- 2:50 BREAK
- 3:10 Terrance J. Martin (Illinois State Museum)
Subsistence under Siege: Animal Remains from 11ML6, the Suspected Site of the 1730 Mesquakie Fort
- 3:30 Leah D. Rogers (Historic Preservation Consultant)
The Value of Historic Sites Archaeology: The City Brewery Site (13PK661) and the Bonaparte Pottery Site (13VB200), Case Studies from Iowa
- 3:50 Patrick E. Martin (Michigan Technological University) and Susan R. Martin (Michigan Technological University)
Industrial Archaeology in Michigan and Beyond
- 4:10 Neal Ferris (Ontario Ministry of Citizenship, Culture, and Recreation)
Where Are You Taking Me Now? Archaeology in Laws

CASH BAR — 5:00-6:30 pm — Centennial Room

BANQUET IN HONOR OF CHARLES E. CLELAND — 6:30-9:30 pm — Big Ten A

Preregistration required

Speakers include: Lynne Goldstein, Acting Dean Phil Smith, William A. Lovis, Bill Lees, Vergil Noble, Henry T Wright III, and James A. Brown

SUNDAY

SUNDAY MORNING — Auditorium

Problems in Later Prehistory

- 8:30 Ron Burk (Michigan Archaeological Society) and Scott Beld (Alma College)
Storage and Residence in the Transition Zone: Late Woodland Winter Occupations in Central Michigan - the Slavik and Aldrich Sites
- 8:50 Mary Beth Trubitt (Western Michigan University)
Cahokia's Palisade: The Politics of Protection
- 9:10 Jenna Hamlin (Washington University in St. Louis), John E. Kelly (Washington University in St. Louis), and James A. Brown (Northwestern University)
Revisiting Cahokia's Mound 34: The Archaeology of Archaeology
- 9:30 Michael Farkas (University of Illinois-ITARP) and David J. Nolan (University of Illinois-ITARP)
An Examination of Mississippian Settlement in the Lower Illinois River Valley
- 9:50 BREAK
- 10:10 Thomas Emerson (University of Illinois) and Kristen Hedman (University of Illinois)
Langford Tradition Mortuary Patterns at the Material Services Quarry Site in the Upper Illinois River Valley
- 10:30 Clare McHale Milner (Penn State University)
Interpreting Interregional Interaction during the Juntunen Phase in the Western Great Lakes
- 10:50 David J. Nolan (University of Illinois at Urbana-Champaign-ITARP), Lawrence A. Conrad (Western Illinois University), and Steven L. Tieken (Western Illinois University)
Protohistoric Remains From the Lima Lake Locality of the Upper Mississippi River Valley
- 11:10 Matthew P. Purfill (Gray & Pape, Inc.)
Testing Already Tested Interpretations: New Evidence from Flotation Analysis of the Driving Range Site, Southwestern Ohio
- 11:30 J. E. Bowen (Ohio Historical Society)
The Ensign Locality (33SA93): A 15th Century Settlement Near the Western Margin of the Castalia Prairie in Sandusky County, Ohio

ABSTRACTS

Abstracts are arranged alphabetically by author. The session number appears in parentheses following the abstract; a list of sessions and session numbers are indicated below.

Session 1

Archaeology in the Upper LaCrosse River Valley: The Fort McCoy Military Installation
(Friday morning — Auditorium)

Session 2

Regional Perspectives in Midwest Archaeology
(Friday morning — Auditorium)

Session 3

Issues of Ritual and Meaning
(Friday afternoon — Auditorium)

Session 4

New Perspectives on the Angel Site (12VG1)
(Friday afternoon — Auditorium)

Session 5

Analytic Methods and Techniques
(Friday afternoon — Lincoln Room)

Session 6

Movement, Maintenance, and Meals: Historical Perspectives
(Saturday morning — Auditorium)

Session 7

Woodland Manifestations Through Time and Space
(Saturday morning — Lincoln Room)

Session 8

PLENARY SESSION — Charles E. Cleland: Odysseus of the Northern Great Lakes
(Saturday afternoon — Big Ten A)

Session 9

Problems in Later Prehistory
(Sunday morning — Auditorium)

Dean L. ANDERSON (Michigan Historical Center) — see BARONDESS — [7]

Stephen BALL (Glenn A. Black Laboratory of Archaeology, Indiana University)

THE CONTINUING LEGACY OF GLENN BLACK: REMOTE SENSING SURVEYS AT THE ANGEL SITE The Angel site (12 Vg 1) has the distinction of being the first prehistoric site in the United States investigated through a magnetic survey (1959). Glenn Black's innovative remote sensing survey of the Angel site combined close interval magnetic sampling, fine-scale elevation maps, and the presence/absence of various plants to trace the path of the palisade wall at the site. The Glenn Black Laboratory has continued this tradition of nondestructive investigation resulting in subsurface maps of striking detail, which have expanded our knowledge of intra-site patterning at Angel. [4]

David A. BARONDESS (Wayne State University), Dean L. Anderson (Michigan Historical Center), Scott G. Beld (Alma College), and Michael Hambacher (Great Lakes Research Associates)

A RED OCHRE BURIAL IN ST. IGNACE, MICHIGAN In July of 1994, backhoe excavation for replacement of a water service line struck a Red Ochre burial in St. Ignace, Michigan. Most of the burial had already been disturbed by the original installment of the line, but the skull, several vertebrae, and part of one shoulder remained in situ. Associated with the burial were a number of Meadowood bifaces and several fragments of copper beads. Red ochre staining is present on the skeletal elements and on some of the bifaces. The Meadowood affiliation suggests a Terminal Archaic/Early Woodland date for the burial sometime between 1000-400 B.C. This is the northernmost reported occurrence of a Meadowood assemblage in Michigan. [7]

Jarred BARRETT (Fort McCoy Archaeology Laboratory)

THE NOT SO BURIED CITY SITE OF FORT MCCOY, WISCONSIN The Buried City site (47Mo52) is located in Fort McCoy, Wisconsin. This site has a unique history behind it and provides information about Archaic features in the Upper La Crosse River Valley. Paul E. Patchin, an amateur geologist, first discovered the site, thinking it was a Bronze Age city buried in the sands of western Wisconsin and reported it to the State Historical Society of Wisconsin. The state investigated and, to Mr. Patchin's credit, did find a prehistoric occupation. In the summer of 1999, Fort McCoy archaeologists investigated the site with a phase II excavation, in which an Archaic lithics processing/heat treating feature was revealed. The purpose of this paper is to show the unique history of this site, and present information regarding the use and date of the feature. [1]

Jane Eva BAXTER (University of Michigan)

MR. LOBTINERE'S NEIGHBORHOOD: REASSESSING COMMUNITY AND STATUS AT FORT MICHILIMACKINAC During the late 17th and early 18th centuries the community within the palisaded walls of Fort Michilimackinac was located at the crossroads of a dynamic trade network yet was remotely stationed at the periphery of the French colonial empire. Current interpretations of the social dynamics of this community include an emphasis on the replication of strict, residentially-bound social hierarchies such as those found in contemporaneous eastern settlements and in France. This paper presents a reinterpretation of historical and archaeological data that challenges these notions of hierarchy and community, suggesting a much more homogenous and intermingled population at the Fort during the period of French occupation, as well as suggesting future avenues for research. [6]

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I had ditched enclosure

Scott G. BELD (Alma College)

ARTHURBURG HILL: AN EARLY WOODLAND EARTHWORK ENCLOSURE IN CENTRAL MICHIGAN
Excavations between 1992 and 1998 at the Arthurburg Hill Earthwork Enclosure located in central Michigan identified a major Early Woodland occupation and minor Late Archaic and Late Woodland occupations. A series of eight radiocarbon dates indicate a date for construction of the enclosure around 400 B.C. The site is interpreted as a low-level integrative facility with evidence of domestic and ceremonial activities. [7]

Mostly Kromer pl - few Haly - few Turkey

Scott G. BELD (Alma College) - see BARONDESS - [7]

Talk - most locate dirt
bar amulet found too!
Some Late Archaic occup too, etc

Scott G. BELD (Alma College) - see BURK - [9]

Chris BENISON (CCRG, Inc.) and Sean B. Dunham (CCRG, Inc.)

NEW EVIDENCE FOR TRANSITIONAL MIDDLE/LATE WOODLAND SITES IN NORTHEASTERN LOWER MICHIGAN Recent Phase II excavations recovered important data from four late prehistoric sites along the Au Sable River, Iosco County, Michigan. Two of these sites, 20IS125 and 20IS173, contained shallow refuse disposal features which yielded cord-marked ceramics indicating a transitional Middle/Late Woodland date. In addition, site 20IS125 yielded a dentate-stamped ceramic having clear similarities to Laurel phase specimens. Sites 20IS125 and 20IS173 are compared with key sites in the region to expand upon existing settlement and subsistence models for the transitional Middle/Late Woodland period in Michigan's northeastern Lower Peninsula. [7]

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Thomas BERRES (Northern Illinois University), David M. Stothers (University of Toledo), and Brad W. Bodoh (Northern Illinois University)

BEAR IMAGERY AND RITUAL IN THE MIDCONTINENT: REFLECTIONS ON A. IRVING HALLOWELL'S WORK Over 70 years ago Alfred Irving Hallowell called attention to the distribution of bear ceremonialism throughout most of Eurasia and North America. Reevaluating his work in 1966, Hallowell focused on how Native Americans viewed their own unified world where the bear was revered for successful hunting and as a powerful ally in healing. This study draws on Hallowell's insights to show the significance of ethnohistory, art history, and mythology for interpreting the archaeological record. A discussion of bear remains from the Late Archaic/Early Woodland Williams mortuary site in Ohio and the historic Bell site in Wisconsin will be presented. [3]

M. Catherine BIRD (Midwest Archaeological Research Services), Carrie Koster (Midwest Archaeological Research Services), and Anne Grauer (Loyola University)

"TO BE HELD IN TRUST" Pursuant to the HSRPA, MARS, Inc. Facilitated the removal of human skeletal remains and grave artifacts June and July of 1999, from the unmarked farm field containing ten burial features at the Burying Ground at Vandaworker's Corners (11-L-572). The Burying Ground, deeded by Abraham and Julia Vandaworker to the Methodist Episcopal Church at Fairfield in 1872, was located and described by MARS, Inc. Within a 0.5 acre parcel Ela Township, Lake County, Illinois. The burial features were organized in three rows at the southeast corner of the platted Burying Ground at Vandaworker's Corners. [6]

Wayne BIRSCHOFF (Hemisphere Field Services)

THE ARCHAEOLOGY OF THE CLINTON AND KALAMAZOO CANAL: NEW INSIGHTS INTO 19TH CENTURY MICHIGAN INTERNAL IMPROVEMENT ENGINEERING AND SPATIAL RELATIONSHIPS Archaeological research conducted by Hemisphere Field Services in Clinton Township, Michigan, in 1999 revealed new information about the Clinton and Kalamazoo Canal and the spatial relationship of canals, mills, and supporting structures. The Clinton and Kalamazoo Canal was a short-lived early 19th Century Michigan internal improvement project, which was designed to provide controlled water for mills as well as state-wide transportation services. A number of mills were once located near the extinct town of Frederick, Michigan, which was the eastern terminus of the canal. Archaeological excavation and observation identified a Clinton and Kalamazoo Canal lock, the canal dam on the Clinton River, a mill dam and race, and a number of mill sites, holding ponds, earthen embankments, and water flow control structures. The modification of the landscape by local residents and the State of Michigan was a mutually beneficial undertaking, with success of both the mills and the canal in mind. The result was a very complex system of interacting engineering structures. This paper will discuss this interaction, as well as give descriptive information on the various canal and mill features studied. [6]

Brad W. BODOH (Northern Illinois University) — see BERRES — [3]

Don BOOTH (Illinois Transportation Archaeological Research Program) — see FOOR — [5]

J. E. BOWEN (Ohio Historical Society)

THE ENSIGN LOCALITY (33SA93): A 15TH CENTURY SETTLEMENT NEAR THE WESTERN MARGIN OF THE CASTALIA PRAIRIE IN SANDUSKY COUNTY, OHIO Before 1450, one population of the Sandusky ceramic tradition was concentrated near the rich fishery around the head of Sandusky Bay. Another was concentrated 40 km to the east, along the Huron River, on the other side of the Castalia Prairie. After 1450, the Huron River area was largely devoid of settlements, as the population shifted to the west. The Ensign locality (33SA93) appears to be a settlement established by people from the Huron River who had moved westward, just across the prairie, closer to Sandusky Bay. A total of 570 square meters of 33SA93 were excavated in 1999. [9]

Janet BRASHLER (Grand Valley State University) and Margaret B. Holman (Michigan State University)

MIDDLE WOODLAND ADAPTATION IN THE CAROLINIAN/CANADIAN TRANSITION ZONE OF WESTERN LOWER MICHIGAN In his enduring work on ethnozoology in the Upper Great Lakes, Charles Cleland (1966) analyzed the differing adaptive strategies of Middle Woodland peoples living in the Carolinian and Canadian Biotic Provinces. Subsequent studies by Cleland and others focused on how people at various times used the transition zone between these biotic provinces. This paper evaluates models of Havana/Hopewell subsistence and settlement in western lower Michigan with a view toward understanding how groups living at the northern limits of the Carolinian Biotic Province used the transition zone which was also part of their local environment. Data from key habitation sites along the Grand River where Havana/Hopewell mound and village complexes are located is

coupled with information as to site placement, environmental setting, and archaeological evidence from sites throughout the transition zone to address the problem. [8]

James A. BROWN (Northwestern University)

OBSERVATIONS ON THE ARCHAEOLOGY OF EIGHTEENTH CENTURY FUR TRADE IN THE MIDWEST The Midwest saw major changes in the scale and organization of the fur trade during the 18th century that were largely a response to market forces and organizational changes in Europe. This paper will show how these changes have left an archaeological imprint. This paper will emphasize the usage these patterns have more broadly in the anthropological archaeology. [8]

James A. BROWN (Northwestern University) — see HAMLIN — [9]

Marla BUCKMASTER (Northern Michigan University)

EVIDENCE OF PREHISTORIC HORTICULTURE IN MICHIGAN'S UPPER PENINSULA During the Fall of 1995, a Menominee County resident reported garden ridges along the Menominee River near Stephenson, Michigan. A team of Menominee County Historical society volunteers, in cooperation with Northern Michigan University, has mapped these ridges. Several features are particularly interesting. First, their location in Michigan's Upper Peninsula places them on the northern limit of Upper Great Lakes horticulture. Secondly, they have escaped destruction by plowing and/or development. Shovel testing and limited excavation recovered cultural material suggesting their cultural affiliation. Finally, phytolith and flotation samples were collected last summer. [8]

Sheldon R. BURDIN (Indiana University Southeast & IPFW Archaeology Survey)

THE ARCHAEOLOGY OF THE FALLS AREA OF THE OHIO RIVER VALLEY - PALEOINDIAN THROUGH WOODLAND PERIODS (12,000-1,000 BP) The prehistory of the Falls Area of the Ohio River valley is not well understood. Limited studies have been conducted in the Falls Area. The presence of over 2,500 known prehistoric sites in the area represents a significant concentration of prehistoric occupations. Less than three percent of these sites have been studied in depth. The first phase of researching these cultures is to write a culture history, or a paleoethnography, of these extinct peoples. A comprehensive culture history has not been completed for the Falls Area of the Ohio River valley. This study is the culture history of the Paleoindian (12,000-10,000 BP), the Archaic (10,000-2750 BP), and Woodland (2,750-1000 BP) Traditions in the Falls Area. [2]

Ron BURK (Michigan Archaeological Society) and Scott Beld (Alma College)

STORAGE AND RESIDENCE IN THE TRANSITION ZONE: LATE WOODLAND WINTER OCCUPATIONS IN CENTRAL MICHIGAN -- THE SLAVIK AND ALDRICH SITES The Slavik and Aldrich sites are two late prehistoric sites (ca. 1450-1600 A.D.) located at the southern edge of the Carolinian-Canadian transition zone in central Michigan. Excavations at the Slavik site between 1992 and 1995 identified several features (pits) containing aquatic tubers and a faunal assemblage. Excavations in 1995 at the nearby Aldrich site identified a contemporary residential area, also with a faunal assemblage and floral remains. Replication experiments indicate a probable use as storage pits for the Slavik site features. [9]

Jarrold BURKS (Ohio State University) and William S. Dancy (Ohio State University)

DOCUMENTING TERMINAL MIDDLE WOODLAND COMMUNITY PATTERN CHANGE IN CENTRAL OHIO: AGGREGATED HOUSEHOLDS AT THE STRAIT SITE The end of the Middle Woodland period (ca. A.D. 300-A.D. 500) represents a tie of marked change in the archaeological record of the Midwest. While the termination of classic Hopewell activities is typically discussed, changes in the organization of communities and day-to-day life are equally provocative. Continuing work at the Strait site in Fairfield County, Ohio, has begun to document a major disjunction in Woodland period settlement patterns: the transition from dispersed household Middle Woodland to aggregated village early Late Woodland communities. Ongoing analysis of artifact styles and distributions suggests that Strait represents an early aggregation of contemporaneous households. [7]

Jarrold BURKS (Ohio State University) and Jennifer Pederson (Hopewell Culture National Historic Park)

FROM SECULAR TO SACRED: A COMPARISON OF OCCUPATION DEBRIS FROM MIDDLE WOODLAND HABITATION AND EARTHWORK SITES IN CENTRAL OHIO Over the past 150 years, studies of Middle Woodland occupation debris from earthwork and non earthwork related contexts have resulted in a variety of hypotheses as to the location and nature of Hopewell habitation. In this paper we compare and contrast the occupation debris from three earthwork sites, Hopewell Mound Group, Hopeton Earthworks, and Mound City with that from nearby habitation sites, including the McGraw site and the Overly Tract. Only through close scrutiny and comparison of debris from all manner of contexts can archaeologists ever expect to understand Middle Woodland settlement. [7]

Leslie L. BUSH (Glenn Black Lab, Indiana University)

BICENTENNIAL TREASURES: PLANT REMAINS FROM THE 1976 EXCAVATIONS AT THE ANGEL SITE Recent examination of flotation-recovered botanical remains from the 1976 excavations at the Angel site indicate a distinctive Mississippian diet for its inhabitants, in contrast to the diets of their Oliver Phase and Fort Ancient neighbors. In addition, the plant remains yield data on agricultural practices, construction materials, and differences between feature types noted in excavation. While botanical remains from the limited area excavated in 1976 provide too small a sample to assess the entire spatial and temporal span of Angel site occupation, they nonetheless provide valuable information unavailable from any other source, and suggest fruitful possibilities for future research. [4]

Mark CANTIN (Indiana State) — see STAFFORD — [2]

Joseph L. CHARTKOFF (Michigan State University)

THE HISTORIC FISHING COMMUNITY AT ST. JAMES, BEAVER ISLAND During the height of its fishing industry, St. James, on Beaver Island, in northern Lake Michigan, became the most active freshwater fishing port in the U.S. Its fishing community developed a distinctive settlement on the harbor's eastern shore. Recent reconnaissance has identified a number of house and net shed sites. Archival research is revealing complex patterns of kinship-based residence patterns, marriage linkages and functional site interrelationships associated with these sites. This report summarizes

the patterns as currently understood, and their connections to the larger history of Beaver Island and the Great Lakes fishing industry. [6]

Lawrence A. CONRAD (Western Illinois University) — see NOLAN — [9]

Peter CUNNINGHAM (Michigan State University) and Lynne Goldstein (Michigan State University)
THE USE OF GEOGRAPHIC INFORMATION SYSTEMS IN THE MAPPING OF AZTALAN Over the last century, numerous archaeologists have excavated portions of the Aztalan site in southeastern Wisconsin, leaving behind a myriad of excavation records. Much of this research is unpublished, at different scales, and of differing quality making it difficult for current investigators to determine what areas of the site have been studied, to determine what has been found, and to make comparisons across the site. This paper describes the process of compiling past excavation maps into a single entity using ARG/INFO and ARCVIEW, and illustrates the usefulness of a GIS database approach in single site interpretation. [5]

William S. DANCEY (Ohio State University) — see BURKS — [7]

Sean B. DUNHAM (CCRG, Inc.) — see BENISON — [7]

Thomas EMERSON (University of Illinois) and Kristen Hedman (University of Illinois)
LANGFORD TRADITION MORTUARY PATTERNS AT THE MATERIAL SERVICES QUARRY SITE IN THE UPPER ILLINOIS RIVER VALLEY Salvage excavations in 1964-65 by the UIUC at a badly looted and quarried 13th century Langford Tradition Mound and village (11LS50) in LaSalle County Illinois recovered the remains of approximately two dozen individuals. Recent analysis of these remains has provided new information on Langford warfare, health, diet, and mortuary practices. [9]

Michael FARKAS (University of Illinois-ITARP) and David J Nolan (University of Illinois-ITARP)
AN EXAMINATION OF MISSISSIPPIAN SETTLEMENT IN THE LOWER ILLINOIS RIVER VALLEY Recent contract-based investigations in a small tributary hollow of the Lower Illinois River Valley identified a previously unknown Mississippian site (11-Ge-488). Preliminary ceramic analysis suggests the site predates the "late" Mississippian Pearl and Sand Prairie phases. The mere presence of this component calls into question existing regional late prehistoric settlement and interaction models. This paper critically evaluates previously proposed models, describes the site and its remains, and presents an alternative view of earlier Mississippian settlement patterns. [9]

Ken FARNSWORTH (Center for American Archaeology/Univ. of Illinois (ITARP)) and Sarah J Studenmund (UIUC-ITARP)
AFTER THE ARCHAIC: A RE-EXAMINATION OF THE WOODLAND AND LATE PREHISTORIC RADIOCARBON DATABASE FROM WEST-CENTRAL ILLINOIS In this paper we present preliminary results of a re-examination the 14C database for Woodland and late prehistoric occupations in west-central Illinois. Based on calibrations of more than 250 dates from more than 25 habitation sites we suggest revisions of the ages of the Early, Middle and Late Woodland cultural phases for this region. We will also examine the relationships of the dated components

with associated diagnostic artifacts. [2]

Neal FERRIS (Ontario Ministry of Citizenship, Culture, and Recreation)

WHERE ARE YOU TAKING ME NOW? ARCHAEOLOGY IN LAWS Recent decades have done much to take archaeology beyond the domain of academic research and a vocational pursuit. Notably law makers have recognized the need to conserve sites threatened with development impact, and as a result CRM is now arguably the most active form of archaeology in North America, largely funded directly by public or private developers. As well, the participation of Native North Americans with archaeology has also increased as a result of burial issues, Land and Resource Claim research, etc. Of course this creates a wider "constituency" of interests, and makes archaeology a policy issue, leading law makers to respond to these additional constituents (e.g. demands of accountability from those who pay for CRM; demands for input and access by those whose heritage is archaeology, etc.). And as a policy issue additional questions arise, such as who owns (as in controls) archaeology? And if it is the State, on what basis is that ownership asserted? In Canada recent case law and Supreme Court decisions regarding Aboriginal rights are indirectly speaking to this issue. The picture emerging is that ownership and management of archaeology may have less to do with preserving the past, and more to do with the State's fiduciary responsibility for vestige Aboriginal interests. This paper will review these changes to archaeology, its management as policy, and some of the implications and questions of ownership and control may have on the future of archaeology in North America. [8]

Charlie FOOR (Illinois Transportation Archaeological Research Program) and Don Booth (Illinois Transportation Archaeological Research Program)

USING GPS AND GIS TECHNOLOGY IN THE EVALUATION OF EARLY HISTORIC MAP ACCURACY This paper provides initial results for an ongoing study designed to evaluate the accuracy of building structure locations on early historic maps and atlases. The study uses early historic map data and archaeological site data produced during the 1998 Phase I survey of FAP 310 highway project, a project which will continue to the construction of I-255 in a by-pass of the Alton, Illinois area. GPS and GIS technology is utilized to accurately place the location of existing structures or known archaeological site remnants of former structures which are considered to be good candidates to have been represented on early maps. Early farmsteads, cemeteries, and industrial sites such as saw mills are being used as part of the study. Scanned images of early existing sites and structures are digitized for overlay analysis of the early map data combined with the accurate GPS site data. This project will continue throughout the life of the ongoing FAP 310 Project and will hopefully be able to establish a good base line for evaluating early map and atlas accuracy in the St. Louis metropolitan portion of Illinois. [5]

Elizabeth GARLAND (Western Michigan University)

THE WYMER WEST KNOLL SITE AND PATTERNS OF REGIONAL INTERACTION DURING THE MISSISSIPPIAN -- LATE WOODLAND INTERFACE, A.D. 1100-1400, IN SOUTHWESTERN MICHIGAN: A PRELIMINARY STATEMENT In 1998 intensive excavations at the Wymer West Knoll site on the St. Joseph River in southwest Michigan were conducted under a grant from the Michigan Department of Transportation. Wymer is a Middle Mississippian derived site that was intrusive into this area. The site was occupied from ca. A.D. 1100--1400. Discrepancies between the

Wymer data and the cultural chronology at the nearby Moccasin Bluff site remain unresolved. The nature of the Wymer occupation, its relationship to Fisher, and the regional cultural context of the Mississippian -- Late Woodland interface prior to 1400 are discussed. [8]

Lynne GOLDSTEIN (Michigan State University) -- see CUNNINGHAM -- [5]

Amy K GRAHAM (UIUC-ITARP) -- see STUDENMUND -- [5]

Anne GRAUER (Loyola University) -- see BIRD -- [6]

William GREEN (University of Iowa)

CARTOGRAPHIC, HISTORICAL, AND ARCHAEOLOGICAL EVIDENCE FOR IOWAY SETTLEMENT LOCATIONS, CA. 1650-1837 An 1837 Ioway Indian map depicts much of the upper Midwest and eastern Plains. It shows 23 village locations and routes between them, as well as nearly 60 rivers and lakes. Application of historical and archaeological data helps to identify the likely sites and occupation dates of most of the village locations. Concordance among oral history, written records, and archaeological evidence indicates historical memory among the Ioways of the 1830s of settlement locations covering a large region and extending back at least 140 years. The map and associated studies also call attention to the subject of the origin of the Ioway Indians: does the map's indication of an eastern Wisconsin origin directly preceding the tribe's late 17th century residence in northeast Iowa reflect history as accurately as the map's other features, or does it signify a traditional or mythological homeland from some earlier time? [6]

John P. HALE (Ball State University)

A BEAD IN TIME: AN ANALYSIS OF THE SIGNIFICANCE OF THE ROLLED COPPER BEADS EXCAVATED AT THE WHITE SITE, MOUND THREE Copper beads excavated at the White Site, Mound Three in New Castle, Indiana are part of the archaeological assemblage used to identify the site as a late Adena (Robbins Stage) site. But what can we really tell about the site based on these beads? In this paper I explore the beads and their context within the burial, and attempt to discern if they have any particular significance that would identify the tomb as Adena. I argue that the beads are common to many cultures from the Late Archaic through at least the Late Woodland periods and cannot be used to identify the burials. Additionally, how useful are arbitrary culture divisions when so much evidence for cultural continuity exists between many Archaic and Woodland archaeological cultures including, but not limited to, Glacial Kame, Red Ocher, Leimbach, Adena, and Hopewell? [7]

John P. HALE (Ball State University) -- see SWARTZ -- [5]

Michael HAMBACHER (Great Lakes Research Associates) -- see BARONDESS -- [7]

Jenna HAMLIN (Washington University in St. Louis), John E. Kelly (Washington University in St. Louis), and James A. Brown (Northwestern University)

REVISITING CAHOKIA'S MOUND 34: THE ARCHAEOLOGY OF ARCHAEOLOGY In the 1950's Cahokia's Mound 34 was the focus of the University of Michigan and Gilcrease Institute

investigations. Those projects revealed the first and only evidence of engraved shell cups and other related Southeastern Ceremonial Complex materials at Cahokia. During the 1998 and 1999 field seasons, personnel from Washington University and Northwestern University returned to Mound 34 to provide better documentation of the Gilcrease investigations. This paper summarizes the work of the past two years and implications regarding the possible Moorehead phase (~ A.D. 1200) date of this mound. [9]

Kristen HEDMAN (University of Illinois) — see EMERSON — [9]

R. Criss HELMKAMP (Purdue University) and Jessica Javorsek (Purdue University)
A MIDDLE WOODLAND OSSUARY AT THE WEST BEDFORD SITE, WHITE COUNTY, INDIANA
An ossuary salvaged by J. C. Householder in 1958 at the West Bedford site in White County, Indiana, provides information regarding Middle Woodland culture in the prairie region of northwestern Indiana. The shallow crypt was located in a sandy knoll originally thought to be a burial mound. The ossuary population includes a minimum of thirteen individuals. Three forms of burial treatment are present: commingled bundle burials (1 infant and 10 adults), an extended red ochre-treated infant, and a cremated adult. The bundle burials are smoked. The mortuary practices and material culture at the West Bedford site suggest a general affiliation with Havana culture. [7]

Michael HIGGINS (Michigan State University)
ENTOMOLOGY AND DEATH: AN ARCHAEOLOGICAL PERSPECTIVE
Colonization of dead animal tissue by insects follows a predictable succession of species and developmental patterns. Forensic entomologists study these successional patterns and are often able to determine the time of death for a corpse based on the species of insects present and the developmental stages they are in. Under certain circumstances, the remains of carrion-feeding insects may be preserved at archaeological sites from both human and non-human contexts. The recovery and identification of this entomological evidence may provide important insights regarding such human behaviors as burial practices, food preparation, and trash disposal. [5]

Sherri L. HILGEMAN (Indiana University - Southeast)
THE ANGEL SITE AND ITS POTTERY ASSEMBLAGE FROM THE PERSPECTIVE OF THE LOWER OHIO VALLEY
Recently, someone noted that "The [pottery] collection from the Angel site is of staggering size." It is possible to do research on the pottery in an efficient manner due to the thought and care that Glenn Black and James Kellar put into the curation of the collection. In the course of creating a pottery chronology for the site, several characteristics emerged which distinguish the Angel assemblage from contemporary assemblages in the lower Ohio Valley. These include: a lower frequency of decorated sherds, the dominance of the red-slipped over incised pottery, and the persistence of red-slipped pottery after AD 1200. [4]

Margaret B. HOLMAN (Michigan State University) — see BRASHLER — [8]

Ryan HOWELL (Fort McCoy Archaeology Laboratory)
LITHIC PROCUREMENT AND LITHIC RESOURCES USE PATTERNS IN THE UPPER LACROSSE RIVER VALLEY: A PRELIMINARY STUDY
Analysis of prehistoric lithic artifacts from the Upper

LaCrosse River Valley reveals a complex pattern of lithic resource utilization and procurement strategies. Using the data collected and compiled by the Fort McCoy Archaeology Laboratory this paper attempts to model these strategies and track both spatial and temporal changes in the Fort McCoy area. Preliminary analysis reveals that while the prehistoric peoples of the area did use well known lithic sources and materials such as Hixton Silicified Sandstone and Prairie Du Chien chert, they also accessed poorer quality local cherts and orthoquartzites in abundance to supplement these higher quality but more distant resources. [1]

Ryan HOWELL (Fort McCoy Archaeology Laboratory), Stephen Wagner (Fort McCoy Archaeology Laboratory), and Andrew Sewell (Fort McCoy Archaeology Lab)

FORT MCCOY CULTURAL RESOURCE MANAGEMENT: TOTAL FORCE ARCHAEOLOGY Fort McCoy, Wisconsin is a U.S. Army Reserve Command military installation situated on 60,000 acres [square sign] at the headwaters of the LaCrosse River. Archaeology has been carried out in the Fort McCoy area since the early 1970's, with more focused NHPA compliance work dominating the archaeological research since the mid-1980's. Until recently the majority of these efforts had been mainly un-synthesized and unorganized need-based projects. However, since 1995, a more integrated approach utilizing a complete GIS environment and long-term planning has transformed Fort McCoy's archaeology into a useful and interpretable database on the historical and prehistorical archaeology of the LaCrosse River headwaters. This paper presents a preliminary overview of the archaeology of the Fort McCoy area and an introduction to on-going and current projects. [1]

Douglas K. JACKSON (ITARP/UIUC)

THE YELLOW BLUFFS SITE: A MIDDLE WOODLAND MOUND SITE LOCATED IN THE SANGAMON RIVER DRAINAGE OF CENTRAL ILLINOIS The Yellow Bluffs site is a large Middle Woodland village and mound site situated in central Illinois on a tributary of the Sangamon River. The site lies on a prominent upland landform within a locality featuring extensive forest vegetation and lake/marsh habitat, both unusual situations for this prairie dominated region of Illinois. This site has been mentioned in several professional studies, but remains a largely unknown entity. Recently ITARP investigators had the opportunity to produce a detailed map of the badly disturbed mounds associated with this site. Artifact assemblages from the site are also discussed. [7]

Jessica JAVORSEK (Purdue University) — see HELMKAMP — [7]

Kyran V. KELLEY (Western Michigan University)

SAUGATUCK, MICHIGAN: GROWTH OF A RESORT TOWN, 1870 TO 1930 Around the beginning of the current century many communities adapted themselves to a leisure industry which catered to the growing middle class within the United States. This paper examines the transition of one community into a resort town by examining land use, employment, and business composition within the town through the use of both primary and secondary documents. Data gathered within this research suggests that the aesthetics of the local landscape and transportation features, rather than the diminishment of manufacturing and extractive activities, were the primary factors in the adaptation to the resort industry in this case. [6]

John E. KELLY (Washington University in St. Louis) — see HAMLIN — [9]

Carrie KOSTER (Midwest Archaeological Research Services) — see BIRD — [6]

Frank KRIST (Michigan State University) and Randall J. Schaetzl (Michigan State University)
EVIDENCE OF WIND DIRECTIONS CIRCA 11,000 B.P. AND THE EFFECTS ON PALEO PERIOD SETTLEMENT IN THE UPPER GREAT LAKES The abundance of ESE-WSW oriented spits on the northeastern shore of Michigan's Lower Peninsula, coupled with their absence on the northwestern shore strongly suggests that summertime paleowinds during their formation (11,800 to 10,500 yr B.P.) were both very strong and dominantly from the east and southeast. Paleo period (10,900 to 9,500 yr B.P.) sites in the Great Lakes region are often located near the Algonquin shoreline, but are absent on the western (Michigan) side of the lake. Large numbers of archaeological sites in Ontario suggest that the eastern (windward) side of the lake was much less climatically severe during the Latest Pleistocene. [2]

Steven KUEHN (State Historical Society of Wisconsin)

LIFE ON THE WISCONSIN FRONTIER: A YANKEE FAMILY GOES WEST The Sheard Road site represents the mid-19th century homestead of Captain John Trowbridge, an affluent New York businessman who migrated to the Wisconsin territory in 1836. Archaeological testing in 1998 identified an artifact-rich, short-term occupation, while archival research provided detailed information on Trowbridge's life before and after his arrival. The data recovered provide insight on the daily life of Yankee settlers on the frontier, and comparisons are made with similar sites in the Midwest. A reliance on Eastern goods is indicated, a pattern seen at other Yankee settlements in the region. Finally, future research issues are discussed. [6]

Anne B. LEE (Ohio State University) and Jennifer Pederson (Hopewell Culture National Historic Park)

LOCATING MIDDLE TO LATE WOODLAND SITES WITH CONDITIONS CONDUCTIVE TO BONE PRESERVATION IN THE CENTRAL OHIO REGION: A PREDICTIVE MODEL Research focusing on subsistence change in relation to the end of the behavioral patterns associated with the archaeological culture known as Hopewell (200 B.C.-A.D. 400) in the central and south-central Ohio area has been hampered by a lack of well preserved faunal specimens. This paper will attempt to develop a predictive model for locating sites with environments conducive to bone preservation for the Middle to Late Woodland Period in this region. Both human factors and natural factors from several sites will be examined for any significant correlations with the nature of bone preservation. [5]

William L. MANGOLD (Indiana Dept. of Natural Resources)

MUCK AND MARL: BLACK AND WHITE: MIDDLE WOODLAND RITUAL IN THE DIRT? The Hopewell Middle Woodland predilection for items and colors of red, black and white is fairly well established in Ohio and elsewhere. Recent preliminary findings in northwestern Indiana and reinterpretations of evidence from western Michigan and northeastern Illinois appear to indicate that these preferences extended to soils used in mound construction and may indicate previously undocumented ritual behavior. [3]

James A. MARSHALL (Schaumburg IL)

THE POVERTY POINT TOPOGRAPHIC MAP Poverty Point is a prehistoric earthwork built about 1200 B.C. And measures about 3300 ft. by 2200 ft. It consists of 6 concentric half polygons and is now preserved in a northeast Louisiana State Park. Map is drawn from about 11,000 elevation readings that I have collected. It is only in the past few years that the computer capability has developed by which these data could be processed and made to yield contour lines of 1 foot or less interval across the entire site. It is now possible to determine precisely the geometry utilized in prehistoric time. [5]

Andrew V. MARTIN (Ball State University)

A GEOGRAPHICAL INFORMATION SYSTEM (GIS) APPLICATION FOR ROCKSHELTER RESEARCH Rockshelters are affected by a variety of factors which form them. Certain environmental controlling variables in particular, such as aspect on the terrain, elevation, and bedrock lithography; determine the specific factors that affect preservation and site development in these locales. An ArchView geographical information system (GIS) application has been created, and will be presented, showing the visualization and data management capabilities of such software for studying the variables associated with rockshelter sites within a region. This is further used to demonstrate the often overlooked potential for cultural resources within certain 'types' of these sites. [5]

Patrick E. MARTIN (Michigan Technological University) and Susan R. Martin (Michigan Technological University)

INDUSTRIAL ARCHAEOLOGY IN MICHIGAN AND BEYOND In the 1960s-1980s Charles E. Cleland built a formidable program in Historical Archaeology at MSU. Following Chuck's example, Patrick Martin began an interdisciplinary program in Industrial Archaeology at Michigan Tech. Tech's IA philosophy is a direct result of our experiences in East Lansing: the framework of interdisciplinary scholarship, the fundamental importance of field research, the critical issue of student financial support. We describe the challenges facing a novel program, and its successes to date. By definition, Industrial Archaeology studies global processes; therefore its venue, and our research, extends beyond regions and national boundaries. [8]

Susan R. MARTIN (Michigan Technological University) — see Patrick E. MARTIN — [8]

Terrance J. MARTIN (Illinois State Museum)

SUBSISTENCE UNDER SIEGE: ANIMAL REMAINS FROM 11ML6, THE SUSPECTED SITE OF THE 1730 MESQUAKIE FORT For 23 days during the late summer of 1730, 1,400 French and Indian allies laid siege to more than 950 Mesquakie who were en route to west central Indiana. Historians and archaeologists have long debated the precise location of this event. Field schools from Parkland College (Champaign, IL) investigated site 11ML6 in east-central Illinois where they discovered traces of semi-subterranean structures and early eighteenth-century artifacts. The uniqueness of the site's faunal assemblage is considered in light of historical information on the Mesquakies' dire situation. [8]

David MATHER (University of Minnesota/Loucks & Associates, Inc.)

THE BEAR'S FUNERAL: ARCHAEOLOGICAL EXPRESSIONS OF BEAR CEREMONIALISM IN

MINNESOTA Bear ceremonialism in varied forms has been documented ethnographically as a circumpolar and potentially ancient phenomenon. It is reflected in mortuary and other contexts at four archaeological sites in Minnesota. Three are located within or near the Mille Lacs Locality, and include a mound where secondary bear burials parallel the human burial mode, a midden with a concentration of burned bear mandibles, and a recently discovered pit feature containing an estimated 500 bear skulls. The fourth case is a poorly documented mound excavation that produced three modified and painted bear crania. Conclusions from recent examination of these assemblages are discussed. [3]

Clare McHale MILNER (Penn State)

INTERPRETING INTERREGIONAL INTERACTION DURING THE JUNTUNEN PHASE IN THE WESTERN GREAT LAKES Prior studies of the Juntunen phase in the western Great Lakes emphasized the reliance of Juntunen folk on corn obtained through exchange from the Iroquois. This perspective was bolstered by marked stylistic similarities between Juntunen and Ontario Iroquois ceramic traditions. Analysis of stylistic attributes of 1097 vessels from 66 sites indicates that Juntunen phase peoples interacted with a wide range of neighboring peoples who produced different types of pottery. Stylistic variation is likely linked to the construction of alliances with diverse neighboring populations to reduce risk, particularly after the onset of the Little Ice Age. [9]

George R. MILNER (Penn State)

POPULATION GROWTH AND SUBSISTENCE CHANGE IN THE EASTERN WOODLANDS Recently compiled data are used to explore the relationship between population size and subsistence strategies in the Eastern Woodlands. General population trends are estimated using site files from several states. Late prehistory spanned a period of accelerated population growth. Plant remains from hundreds of sites show that the change from hunter-gatherer to agricultural subsistence strategies was indeed long, but it was far from gradual. Instead of continuous change, long periods of near stasis were interrupted by abrupt shifts in subsistence practices that greatly increased productive output. These changes coincided with the period of accelerated population growth across broad areas. [2]

Cheryl Ann MUNSON (Indiana University)

PERSPECTIVES OF THE ANGEL PHASE SETTLEMENT SYSTEM Several decades of excavations at the Angel site show it to be a 40-ha fortified Mississippian town incorporating residential zones, mounds cemeteries, and a plaza. It stands at the geographic center of the regional Angel phase (A.D. 1050-1450). Of the more than 45 known outlying habitation sites, two have large excavation samples. The Southwind site is a 1.8-ha fortified village. The Ellerbusch site is a small 0.3-ha hamlet. To broadly outline a settlement system of the Angel polity, the town, village, and hamlet are compared with respect to domestic activities, architecture, community plan, mortuary behavior, and extraregional exchange. [4]

David J. NOLAN (University of Illinois at Urbana-Champaign-ITARP), Lawrence A. Conrad (Western Illinois University), and Steven L. Tieken (Western Illinois University)

PROTOHISTORIC REMAINS FROM THE LIMA LAKE LOCALITY OF THE UPPER MISSISSIPPI RIVER VALLEY Since 1983, professional and amateur survey in the Lima Lake locality has revealed

the locations of over 400 sites evince more the 1,000 prehistoric components. Until recently, this large and varied data sets contained almost no evidence for late 16th to early 18th century aboriginal occupation. The discovery of Danner are and historic trade material on a previously documented site has lead to a reassessment of some earlier discoveries, as well as our understanding of late prehistoric/protohistoric settlement patterns. This paper reviews the site and its assemblage, placing it into a regional context. [9]

David J. NOLAN (University of Illinois at Urbana-Champaign-ITARP) — see FARKAS — [9]

Stephen T. MOCAS (Indiana State) — see STAFFORD — [2]

Jennifer PEDERSON (Hopewell Culture National Historic Park) — see BURKS — [7]

Jennifer PEDERSON (Hopewell Culture National Historic Park) — see LEE — [5]

Sara L. PFANNKUCHE (University of Illinois, Chicago/ MARS, Inc.)

WHAT HAVE WE LEARNED: ANALYSIS OF THE PRELIMINARY INVESTIGATIONS AT SHELL MIDDEN A AT THE MACKTOWN HISTORIC SITE, WINNEBAGO COUNTY, ILLINOIS After two seasons of preliminary investigations, our understanding of Shell Midden A, and Early/Late Woodland shell midden at the confluence of the Pecatonica and Rock River, has greatly increased. Although shell middens have been previously investigated at the Rock River's source and mouth, this is the only recorded and tested shell midden in northern Illinois. Analysis of the material has been helpful in addressing general research questions on shell middens. What is the definition of a shell midden? What is a typical shell midden? What is the relationship between shell bearing layers and non-shell bearing layers within a midden? [7]

Matthew P. PURTILL (Gray & Pape, Inc.)

TESTING ALREADY TESTED INTERPRETATIONS: NEW EVIDENCE FROM FLOTATION ANALYSIS OF THE DRIVING RANGE SITE, SOUTHWESTERN OHIO A number of conference papers and a recently published journal article have focused on the Late Fort Ancient component of the Driving Range Site in southwestern Ohio. These papers presented evidence that this site represents a small encampment occupied during the fall/winter months exclusively. More recently, an additional 287.5 liters of soil from feature contexts were subjected to flotation procedures, the results of which have undergone preliminary macro-remain analysis. This paper incorporated new flotation evidence with previously known data on the Driving Range Site to test earlier interpretations about the site, as well as propose some new ones. [9]

Leah D. ROGERS (Historic Preservation Consultant)

THE VALUE OF HISTORIC SITES ARCHAEOLOGY: THE CITY BREWERY SITE (13PK661) AND THE BONAPARTE POTTERY SITE (13VB200), CASE STUDIES FROM IOWA As an archaeology student in the late 1970s, I was discouraged by many from specializing in historic sites archaeology because there "was no future in it" or that "everything you could possibly know about the historic period can be found in written documents so why bother with the archaeology?" Not heeding any of these opinions, I specialized in historical archaeology under Charles Cleland's tutelage at Michigan

SW: 'richer, more extensive' connection w/ N Plains. Out IL } 1.4.2
SE: 'poorer' connection w/ N IL (St. Louis) } below then

Schweizer Mt 7: 'hard' with large looking vessel, etc. + several more
w/ Temp. phase 11.5-12.00

Early Milyle = Temp. contemp? - 24-
Temp. phase thus intrusive into valley: Maple River divide down Bar...
Wapolar + St. Louis

State University. It was a career decision that I have never regretted. What I, and others, have discovered during this career is that while documentation does certainly provide a type of data not available for prehistoric sites, that documentation is certainly no substitute for the archaeological record and can often provide a biased or woefully incomplete picture of what actually occurred at a site. There is still much that can be learned about our history and past behaviors through the archaeological study of historic period sites. The recent studies of the City Brewery Site (13PK661) and the Bonaparte Pottery Site (13VB200), mid-late nineteenth century industrial sites in Iowa, are cases in point. Both sites are grossly under-represented in the archival and oral historical records for various reasons, some practical and some social. Without the archaeological studies of these sites, little would be known of their specific histories or of the human dimension of Iowa's early industrial development. This paper will summarize the findings of the data recovery projects conducted at these sites and demonstrate the value and utility of historic sites archaeology. [8]

Robert J. SALZER (Beloit College)

MIDDLE WOODLAND IN SOUTHERN WISCONSIN The accelerated pace of research on the Middle Woodland state in southern Wisconsin over the past several years is producing an unprecedented quantity of data. This information permits the generation of some preliminary observations on the nature of, and differences between, the expressions of these developments in the southeastern and southwestern portions of the state. This paper provides an overview of these two developments and offers hypotheses which might explain the differences in content that are observed. It also proposes that these differences relate to processes involving the origins of both the Trempealeau and Waukesha phases. [7]

Randall J. SCHAEZTL (Michigan State University) - see KRIST - [2]

Mark SCHURR (Notre Dame)

ANGEL BURIAL ARCHAEOLOGY: BEYOND BIOLOGY Human burials are an essential but sometimes controversial source of knowledge about past populations. Over three hundred burials were excavated from the Angel site. As was the case for so many W.P.A. Era sites, the Angel skeleton collection was carefully stored for many years before its research potential was fully understood. Approaches that were unimaginable to the excavators, such as statistical mortuary analyses and bone chemistry studies, are now providing remarkably specific information about Angel chronology, social organization, and ecology. New approaches also provide powerful reasons for the curation and study of professionally excavated, culturally-unaffiliated human remains. [4]

Andrew SEWELL (Fort McCoy Archaeology Laboratory)

THE HISTORICAL ARCHAEOLOGY OF FORT MCCOY COUNTY, WISCONSIN The cultural resources present within the boundaries of Fort McCoy, Monroe County, Wisconsin, range from Paleoindian sites to Japanese P.O.W. Internment camps. In this paper, I describe the resources on post that are associated with Euroamerican activity on the landscape of Fort McCoy, from the first white settlers to the acquisition of the majority of the present post property during World War Two. These resources include the historic farmsteads, industries, and significant military structures located on post. I discuss recent work and the possibilities for future research with Fort McCoy's historic cultural resources. [1]

Andrew SEWELL (Fort McCoy Archaeology Laboratory) — see HOWELL — [1]

Rebecca F. SICK (Ball State University)

NONMETRIC TRAIT ANALYSIS OF THE SKELETAL REMAINS FROM THE NEW CASTLE SITE, HENRY CO., INDIANA Nonmetric traits are minor variations of the human skeleton that commonly take the form of ossicles in the cranial sutures, abnormal ossifications, ossification failure, or variation in foramen location or number. Nonmetric traits are heritable and persistent, and individuals belonging to the same population often exhibit the same traits. The goal of this research is an examination of the skeletal remains from the New Castle archaeological site of Henry Co., Indiana for both primary and secondary nonmetric traits. [5]

Beverly A. SMITH (University of Michigan-Flint)

FROM HOUSEHOLD DIETS TO REGIONAL EXCHANGE SYSTEMS IN THE EARLY HISTORIC UPPER GREAT LAKES A reconstruction of household and site level subsistence economies in early historic period sites in the Upper Great Lakes employs faunal data to establish the preferred species in the diet. A consideration of variables including human settlement, demography, nutritional requirements, environmental characteristics, and availability of prey species demonstrates major differences in subsistence strategies between the territories occupied by the Odawa and Ojibwa nations. The results of the analysis shed new light on the nature of traditional regional exchange interactions and the mid-17th century diaspora of Huron, Petun, and Odawa. [8]

David M. STOTHERS (University of Toledo) — See BERRES — [3]

Russell STAFFORD (Indiana State), Mark Cantin (Indiana State), and Stephen T. Mocas (Indiana State)

A PRELIMINARY REPORT ON THE CAESARS ARCHAEOLOGICAL PROJECT IN THE LOWER OHIO RIVER VALLEY On-going, large-scale excavations over the past 30 months at the Caesars development, in the Falls-of-the-Ohio region near New Albany, Indiana, have yielded a relatively complete stratified Holocene sequence. Occupations are buried as deep as 3 m below surface in Ohio River alluvial ridge or terrace deposits. Components sampled include Early Archaic Kirk, early Middle Archaic, Late Archaic, Riverton, Early Woodland and Middle Woodland. Of particular note is a 1.5 m thick zone of Kirk occupational debris buried in an early Holocene terrace. Also, substantial midden deposits are associated with Late Archaic, Early and Middle Woodland occupations including two structures in the latter component. [2]

Sarah STUDENMUND (UIUC-ITARP) and Amy K Graham (UIUC-ITARP)

PENSTONE: SITE FUNCTION AT A TITTERINGTON PHASE OCCUPATION IN WEST-CENTRAL ILLINOIS Excavations at a small Titterington phase site on the upland divide between the Illinois and Mississippi Rivers have documented a short-term occupation (cal 4000 BP) focused on the production of Sedalia points. We present the results of an analysis of the tool kit and spatial organization of the occupation and demonstrate (through a comparison with other Titterington age occupations from west-central Illinois and eastern Missouri) the unique structure and function of this small upland occupation. [5]

Sarah J STUDENMUND (UIUC-ITARP) — see FARMSWORTH — [2]

Sarah SURFACE (Indiana U.-Purdue at Fort Wayne (IPFW))

STRATEGIES FOR PROCESSING CULTURAL AND NATURAL MATERIALS FROM SEDIMENTS All sciences are dependent on their data sets for the formulation of theoretical models. However, there are many biasing factors acting on archaeological and paleontological data. Therefore, sampling strategies are a key determining factor in the formulation of rigorous hypotheses. Archaeologists and paleontologists employ different methods to sample sediments for microfaunal and microfloral remains. This paper presents a preliminary analysis of the effects of different sediment sampling techniques to prevent bias. Archaeological sediments used for this study were recovered from a Late Archaic site in the Bethlehem Bottoms, Clark County, Indiana. Paleontological sediments were recovered from a Late Tertiary sinkhole near Pipe Creek Jr., Point Isabel Quadrangle, Indiana. [5]

B. K. SWARTZ (Ball State University) and John P. Hale (Ball State University)

THE DEVELOPMENT OF AN ONLINE GLOBAL ROCK ART IMAGE ARCHIVE With the recent technological breakthroughs that have made the moderate purchase price of digital cameras and their eventual widespread availability to the general public, the time is ripe to produce a permanent rock art image archive composed of high resolution digital images that will be accessible on the Internet. Our aim is to create a comprehensive rock art image archive through submissions by archaeologists, art historians, and other rock art enthusiasts. It is anticipated that this archive will result in a worldwide database that can be searched and comparatively analyzed to further reconstruct rock art prehistory and explain rock art phenomena. The overall goal is to provide a permanent rich archive of images for research and study that will not be controlled by any special group. Current digital technology can and should replace the color slide as the means for storing and preserving images of rock art. The advantages of digital technology over color slides are that digital images can (1) be stored indefinitely without degradation of the image, (2) can be copied as many times as necessary, providing multiple backups for preservation, (3) can be manipulated electronically to bring out subtleties of contrast and detail that might otherwise go unnoticed on the original photograph, and (4) can be easily transmitted via the Internet, thereby creating a broad distribution network to an infinitely greater audience. Since rock art itself cannot be physically preserved on a comprehensive basis, it must be preserved by other means. These four advantages allow a feasible approach for the preservation of a fully exposed and fragile archaeological resource that is highly vulnerable. [5]

Steven L. TIEKEN (Western Illinois University) — see NOLAN — [9]

Mary Beth TRUBITT (Western Michigan University)

CAHOKIA'S PALISADE: THE POLITICS OF PROTECTION A shift from mound and plaza construction to palisade building occurred at Cahokia around A.D. 1200. This shift was tied to political changes occurring at this Mississippian center. The second season of fieldwork on the Cahokia Palisade Project resulted in the verification of palisade features on the west side of Cahokia's Grand Plaza. The focus of this project is to locate evidence of the western and northern

walls of the palisade, to refine our understanding of the timing of its construction and use, and to investigate palisade function in terms of defense and delineating the ceremonial center. [9]

Stephen WAGNER (Fort McCoy Archaeology Laboratory)

FORT MCCOY ARCHAEOLOGY: A BRIEF CHRONOLOGY OF MATERIAL CULTURES Fort McCoy provides the opportunity for archaeological surveying and excavation within a 60,000 acres [squared sign] portion of Monroe County, Wisconsin. Archaeological investigation of this military installation provides a look at the archaeological record in west central Wisconsin. This paper provides a brief look at the material cultures found within the boundaries of the installation. [1]

Stephen WAGNER (Fort McCoy Archaeology Laboratory) — see HOWELL — [1]



45th Annual Midwest Archaeological Conference Schedule At-A-Glance

Time/Day	THURSDAY	FRIDAY	SATURDAY	SUNDAY
Morning		Paper sessions 1 & 2 @ Kellogg, Auditorium <i>Exhibits open</i>	Paper sessions 6 & 7 @ Kellogg, Auditorium, Lincoln Rm <i>Exhibits open</i>	Paper session 9 @ Kellogg, Auditorium
Afternoon	Middle Woodland ceramics workshop @ Michigan Historical Center <i>(preregistration required)</i>	Paper sessions 3,4, & 5@ Kellogg, Auditorium, Lincoln Rm <i>Exhibits open</i> <i>Annual business meeting, Auditorium</i>	Plenary session [8] for Cleland @ Kellogg, Big Ten A <i>Exhibits open</i>	
Late Afternoon /Evening	Michigan Historical Center tours, deli buffet <i>(preregistration required)</i>	Reception/cash bar @ Kellogg, Big Ten B/C	Cash bar/Dinner for Cleland @ Kellogg, Big Ten A	