

Midwest Archaeological Conference



**Milwaukee, Wisconsin
October 22-24, 1993**



Program & Abstracts

REF
Conferen
MAC
1993

Jason K. WEINER
317 Fulton St. #3
MANKATO, MN
56001

Send
paper

Pricesite -

Site excavated by Mike Scallin
containing numerous Mill
Creek Ceramics - is within
a few miles of Cuba

Steve Leasnik

REF
Conference
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1993

General Information

MEETING TIMES

Meeting times for each session and each paper are indicated below. Papers will not be allowed to run late; we have promised the hotel that we will keep to our schedule, and this is important since other events are scheduled in the hotel.

COAT CHECK

For those of you not staying at the Marc Plaza, the coat check room on the Main Lobby level just outside the Empire Room will be open throughout the meetings. The cost for checking a coat is 75¢ per garment.

BREAKS

On Saturday and Sunday, refreshments during breaks will be available in the 4th floor foyer.

BOOKS & DISPLAYS

Books & displays presented by a variety of vendors will be available on Saturday, 8:00 am — 5:00 pm, in the Picasso/Rembrandt Room, 4th floor

NAGPRA

Tim McKeown, NAGPRA Coordinator for the National Park Service/Dept. of the Interior, will be available Saturday morning to answer questions people may have about meeting NAGPRA deadlines and requirements. Tim will be set up in the Picasso/Rembrandt Room, 4th floor.

MILWAUKEE PUBLIC MUSEUM

The hotel is located only a few short blocks from the Museum. The first part of the new North American Indian hall — A Tribute to Survival — has just opened and should definitely be seen by all. We have made arrangements for all conference registrants to get free admission to the Museum during the course of the meeting. You must be wearing a conference name badge to take advantage of this offer. The Museum is open every day of the week, but please note that the Museum will be closing at 3:00 pm on Saturday to prepare for a major fund-raising event on Saturday night.

LOCATION OF MEETING ROOMS

Although the meetings are in different rooms on three floors, the elevators are fast, and there are stairways conveniently located.

Monarch	Main Lobby Level	DaVinci/Chagall	4th floor	Regency	5th floor
Empire	Main Lobby Level	Picasso/Rembrandt	4th floor		

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

Friday afternoon

MIDWESTERN US ARCHAEOLOGY: PERSPECTIVES ON THE INFLUENCE OF MELVIN L. FOWLER (*Session 1: Monarch Room*)

- 1:30 **Lynne Goldstein** (U of Wisconsin-Milwaukee) INTRODUCTION
- ✓ 1:40 **Bonnie W. Styles** (Illinois State Museum) and **Steven R. Ahler** (University of Illinois) CHANGING INTERPRETATIONS OF MODOC ROCK SHELTER *deer increase due to hunting -*
- ✓ 2:00 **Michael L. Hargrave** (Center for Archaeological Investigations) and **Jeanette E. Stephens** (Center for Archaeological Investigations) HOPEWELL AND CRAB ORCHARD: THE MIDDLE WOODLAND PERIOD IN SOUTHERN ILLINOIS *d*
- ✓ 2:20 **Bruce D. Smith** (Smithsonian Institution) PRESCIENCE AND PREHISTORY: MELVIN FOWLER'S REMARKABLE INSIGHTS REGARDING THE ORIGINS OF PLANT DOMESTICATION IN EASTERN NORTH AMERICA
- ✓ 2:40 **Elizabeth Benchley** (U of Wisconsin-Milwaukee) MELVIN FOWLER: FOUR DECADES OF CAHOKIA ARCHAEOLOGY
- 3:00 — break —
- ✓ 3:10 **George R. Milner** (Pennsylvania State University) CONTROVERSIES CONCERNING CAHOKIA'S COMMUNITIES
- ✓ 3:30 **Martha Rolingson** (Arkansas Archaeological Society) SYMBOLIC AND CALENDRIC ASPECTS OF COMMUNITY DESIGN IN EASTERN NORTH AMERICA
- ✓ 3:50 **Robert L. Hall** (U of Illinois at Chicago) WHAT IS MESOAMERICAN DIRECTIONAL SYMBOLISM DOING IN NEBRASKA?
- ✓ 4:10 DISCUSSANT: **James B. Stoltman** (U of Wisconsin-Madison)
- ✓ 4:30 DISCUSSANT: **James B. Griffin** (Smithsonian Institution)

Friday evening

DINNER IN HONOR OF MELVIN L. FOWLER (*Empire Room — by prior reservation only*)

- 6:00 Cash bar
- 7:00 Dinner
- 8:15 **William F. Halloran** (Dean of the College of Letters & Sciences, University of Wisconsin-Milwaukee) WELCOME
- 8:20 **Howard Winters** (New York University): A FEW REMARKS & REMINISCENCES ABOUT MELVIN L. FOWLER
- 8:30 **Moreau Maxwell** (Michigan State University): MELVIN L. FOWLER, MR. ILLINOIS ARCHAEOLOGY

Saturday morning

METHODOLOGICAL APPLICATIONS TO SITE & DATA ANALYSIS PROBLEMS [Session 2: *DaVinci-Chagall Room*]

- 8:30 **Tom Pleger** (U of Wisconsin-Madison) A FUNCTIONAL AND TEMPORAL ANALYSIS OF COPPER IMPLEMENTS FROM THE CHAUTAUQUA GROUNDS SITE (47-MT-71), A MULTI-COMPONENT SITE NEAR THE MOUTH OF THE MENOMINEE RIVER
- 8:45 **James G. Foradas** (Ohio State University) NORMATIVE MINERAL COMPOSITION VARIATION IN PENNSYLVANIAN AGE CHERTS (FLINTS) FROM SEVERAL QUARRIES USED BY OHIO HOPEWELL: REPORT OF PROGRESS AND IMPLICATIONS FOR ONGOING RESEARCH
- 9:00 **Joseph Alan Artz** (University of Iowa) GEOARCHAEOLOGICAL OBSERVATIONS OF BURIED ARCHAEOLOGICAL COMPONENTS IN LOESS-MANTLED TERRAINS OF IOWA
- 9:15 **Gail M. Saler** (U of Wisconsin-Milwaukee) MOUND VERIFICATION THROUGH SOIL PROBE STUDIES
- 9:30 **John A. K. Willis** (Northwestern University) THE ZIMMERMAN SITE (11LS13) GRID D SURFACE COLLECTION: AN INVESTIGATION INTO THE SPATIAL RELATIONSHIPS OF RECOVERED MATERIALS USING THE PC-BASED ATLAS/GIS PROGRAM
- 9:45 **Charles B. Stout** (World Heritage Museum) A DIRECTIONAL VARIANCE METHOD FOR IDENTIFYING AND DESCRIBING PATTERNS IN SURFACE COLLECTION NUMERICAL DATA

PERSPECTIVES ON CAHOKIA [Session 3: *Monarch Room*]

- 8:30 **John E. Kelly** (SIU-E) THE DISCOVERY, DEBATE, AND DESTRUCTION OF AMERICAN BOTTOMS MOUNDS: A PRELUDE TO THE PRESERVATION OF CAHOKIA MOUNDS
- 8:45 **Bill Iseminger** (Cahokia Mounds State Historic Site) THE CAHOKIA STOCKADE: A STUDY OF FORTIFICATION FORM AND FUNCTION
- 9:00 **James A. Marshall** (Schaumburg IL) WOODHEDGE AND THE CAHOKIA YARD: A SKEPTICAL VIEW
- 9:15 **Timothy Pauketat** (University of Oklahoma), **Gayle Fritz** (Washington University), **Lucretia Kelly** (Washington University), and **Neal Lopinot** (Southwest Missouri State U) EARLY CAHOKIA: A NEW RESEARCH PROJECT IN THE AMERICAN BOTTOM
- 9:30 **Donald Blakeslee** (Wichita State University) CHRONOLOGICAL AND STYLISTIC ANALYSIS OF CAHOKIAN INFLUENCES IN THE CENTRAL GREAT PLAINS

HISTORICAL ARCHAEOLOGY: OVERVIEWS AND NATIVE AMERICAN SITES [Session 4: *Regency Room*]

- 9:00 **Joyce A. Williams** (Southern Illinois University) and **Fran McIntosh** (Southern Illinois University) HISTORIC COMPONENT OVERVIEW AT THE SCOTT JOINT-USE PROJECT
- 9:15 **Duane Esarey** (Dickson Mounds Museum) and **Mark Esarey** (Univ of Kentucky) EVIDENCE FOR MANUFACTURE OF 19TH CENTURY, POINT PLEASANT-STYLE TOBACCO PIPES IN ILLINOIS
- 9:30 **Dean L. Anderson** (Bureau of Michigan History) and **Beverly A. Smith** (Michigan State University) UTILITY TRENCH ARCHAEOLOGY: A MIDDLE HISTORICAL-PERIOD ASSEMBLAGE FROM MACKINAW CITY, MICHIGAN
- 9:45 **Mark L. Madsen** (Roosevelt University/Chicago Archeological Soc) THE TERRY SITE AND ITS RELATIONSHIP TO THE POTAWATOMI VILLAGE OF SEMINICON, OR PAW PAW GROVE
- 10:00 —break—

- 10:15 **Richard P. Mason** (U of Wisconsin-Oshkosh) RECENT EXCAVATIONS AT THE DOTY ISLAND VILLAGE SITE (47-WN-30), NEENAH, WISCONSIN
- 10:30 **Cynthia L. Peterson** (Office of the State Archaeologist, Iowa), **Leah D. Rogers** (Office of the State Archaeologist, Iowa), and **Fred A. Finney** (Office of the State Archaeologist, Iowa) INVESTIGATION OF THE TURKEY RIVER SUBAGENCY SITE (13WH111), WINNESHIEK COUNTY, IOWA: A GOVERNMENT ADMINISTRATIVE SUBAGENCY TO THE WINNEBAGO INDIANS, 1840-1848
- 10:45 **Jeffery Behm** (U of Wisconsin-Oshkosh) COMMUNITY PLAN OF THE BELL SITE (47-WN-9), THE GRAND VILLAGE OF THE MESQUAKIE
- 11:00 **Philip Salkin** (Archeological Consulting and Services) THE PIG'S FORT AND THE FOX VILLAGE: NEW INSIGHTS INTO THE ARCHAEOLOGY OF THE PRAIRIE DU CHIEN AREA

PALEO-INDIAN AND ARCHAIC ISSUES: LITHIC ANALYSES & ACTIVITY AREAS [Session 5: DaVinci-Chagall Room]

- 10:15 **Ronald L. Collins** (Kent State Univ/Cleveland Museum) and **Bill Byrd** (Kent State Univ) MORPHOLOGY, FUNCTION, AND USE LIFE: AN EVALUATION OF THE PALEO CROSSING SCRAPER ASSEMBLAGE
- 10:30 **Charles E. Cleland** (Michigan State University) and **David Ruggles** (Michigan State University) THE SAMELS FIELD SITE: AN EARLY ARCHAIC BASE CAMP IN NORTHWEST LOWER MICHIGAN
- 10:45 **Jerald E. Maiers** (Ruigers University) THE APPLICATION OF FUZZY CLUSTER ANALYSIS TO THE CLASSIFICATION OF THE LITHICS OF THE MODOC ROCK SHELTER
- 11:00 **Karen Atwell** (Center for American Archaeology) and **Daniel B. Goatley** (Center for American Archaeology) STUDIES OF TERMINAL ARCHAIC/EARLY WOODLAND SETTLEMENT AND ACTIVITIES IN THE NORTHERN SYN DRAINAGE, ILLINOIS
- 11:15 **James E. Myster** (Minnesota Historical Society) and **Brian W. Hoffman** (UW-Madison) DATA RECOVERY INVESTIGATION OF THE ST. CROIX RIVER ACCESS SITE (21WA49), WASHINGTON COUNTY, MINNESOTA: A MULTICOMPONENT WOODLAND AND ARCHAIC HABITATION SITE

ONEOTA MORTUARY STUDIES [Session 6: Monarch Room]

- 10:10 **Jodie A. O'Gorman** (SHSW Museum Archaeology Program) INTRODUCTION
- 10:15 **Shirley Schermer** (Office of the State Archaeologist, Iowa) NORTHEAST IOWA ONEOTA MORTUARY PATTERNS
- 10:30 **Paul P. Kreisa** (University of Illinois-Urbana) A NEW LOOK AT AN OLD PROBLEM: THE FUNCTION OF MOUNDS IN ONEOTA SOCIETY
- 10:45 **Jodie A. O'Gorman** (SHSW Museum Archaeology Program) and **Holly Halverson** (MVAC) PATTERNS OF ONEOTA MORTUARY BEHAVIOR AT THE LA CROSSE LOCALITY, WISCONSIN
- 11:00 **Sharron Santure** (Illinois State Museum) NORRIS FARMS 36 CEMETERY
- 11:15 **James A. Brown** (Northwestern University) FROM MOUNDS TO CEMETERIES: CONTINUITY AND CHANGE IN ONEOTA MORTUARY PRACTICES
- 11:30 DISCUSSANT: **Lynne Goldstein** (U of Wisconsin-Milwaukee)

Saturday afternoon

PUBLIC EDUCATION: PUTTING IT TO WORK [Session 7: DaVinci-Chagall Room]

- 1:30 **Mary L. Kwas** (Chucalissa Archaeological Museum/MSU) **ARCHAEOLOGY AND PUBLIC EDUCATION: AN INTRODUCTION TO THE DIVERSITY**
- 1:45 **Cynthia Stiles** (Nicolet National Forest) **AZTALAN STATE PARK: AN ANCIENT SITE WITH A NEW LOOK**
- 2:00 **Bonnie Christensen** (Mississippi Valley Archaeology Center) **MISSISSIPPI VALLEY ARCHAEOLOGY CENTER'S "ARCHAEOLOGY IN EDUCATION PROGRAM"**
- 2:15 **Gordon R. Peters** (USDA Forest Service) and **Kathleen Schamel** (CEHP, Inc) **PASSPORT IN TIME: VOLUNTEERS IN HERITAGE MANAGEMENT**
- 2:30 — break —
- 2:45 **Loreta Rhoads** (Illinois Arts Council) **TRADITIONAL ARTS AND PUBLIC FUNDING AGENCIES**
- 3:00 **Nick Clark** (Minnetrista Cultural Center) **THE MINNETRISTA COUNCIL: A CULTURAL NETWORK FOR THE WOODLAND PEOPLE**
- 3:15 **Raymond O. White Jr** (Miami Nation of Indiana) **THE MIAMI OF INDIANA: WORKING WITH CULTURE**
- 3:30 **Zennie Herring** (Cahokia Mounds Museum Society) and **Al Meyer** (Cahokia Mounds Museum Society) **THE ROLE OF THE SUPPORT ORGANIZATION**
- 3:45 **Suzanne Kutterer-Siburt** (Cahokia Mounds) **ARCHAEOLOGY/EDUCATION CANNOT EXIST IN A VACUUM**
- 4:00 **DISCUSSANT: William Green** (Office of the State Archaeologist, Iowa)

PERSPECTIVES ON EFFIGY MOUNDS: MAPPING, PRESERVATION, AND INTERPRETATION [Session 8: Monarch Room]

- 1:30 **Larry Johns** (Winnebago Nation GIS Department) **INVENTORY AND MAPPING DANE AND ROCK COUNTY EFFIGY MOUNDS**
- 1:45 **Clark A. Dobbs** (Institute for Minnesota Archaeology) **RECONSTRUCTING THE MOUNDS OF ROCK COUNTY AND THE NORTHWESTERN ARCHAEOLOGICAL SURVEY RECORDS**
- 2:00 **Steven Hackenberger** (University of Wisconsin Centers) and **He Ping** (Winnebago Nation GIS Dept) **GIS MODELS OF EFFIGY MOUND LOCATIONS**
- 2:15 **James P. Scherz** (U of Wisconsin-Madison), **Jan Beaver** (Winnebago Nation), and **Richard Brown** (Winnebago Nation) **EAGLE EFFIGY MOUNDS NEAR MUSCODA, WISCONSIN**
- 2:30 **Steven Hackenberger** (University of Wisconsin Centers) **EFFIGY MOUNDS IN GLOBAL PERSPECTIVE**
- 2:45 **DISCUSSANT: Representative from the Winnebago Nation**
- 3:00 **DISCUSSANT: Robert Salzer** (Beloit College)
- 3:15 **DISCUSSANT: Rodney Riggs** (State Historical Society of Wisconsin)

REGIONAL AND THEMATIC STUDIES OF MIDWESTERN ARCHAEOLOGY: VIEWS FROM A NUMBER OF SITES [Session 9: Regency Room]

- 1:30 **Gregory Walz** (U of Illinois Urbana-Champaign) and **Thomas J. Riley** (U of Illinois Urbana-Champaign) **PRELIMINARY REPORT ON THE 1993 UNIVERSITY OF ILLINOIS ARCHAEOLOGICAL FIELD SCHOOL: INVESTIGATIONS IN THE UPPER ILLINOIS RIVER VALLEY, LASALLE COUNTY, ILLINOIS**
- 1:45 **Douglas K. Jackson** (University of Illinois-Urbana), **Bryant Evans** (University of Illinois-Urbana), and **Michael J. Higgins** (University of Illinois-Urbana) **AN OVERVIEW OF THE UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN'S INVESTIGATIONS ALONG THE FAP 310 ARCHAEOLOGICAL PROJECT ALIGNMENT IN THE AMERICAN BOTTOM**

- 2:00 **Brad H. Koldehoff** (Southern Illinois U at Edwardsville), **Bonnie L. Gums** (Southern Illinois U at Edwardsville), and **Charles O. Witty** (Southern Illinois U at Edwardsville) RECENT INVESTIGATIONS ALONG THE KASKASKIA TRAIL IN MONROE COUNTY, ILLINOIS
- 2:15 **George R. Milner** (Pennsylvania State University) and **Sissel Schroeder** (Pennsylvania State University) THE BOIS BRULE BOTTOMS: PLUGGING GAPS IN SURVEY COVERAGES
- 2:30 **Sissel Schroeder** (Penn State University) WATER, WATER EVERYWHERE: PREHISTORIC OCCUPATION IN THE SOUTHERN AMERICAN BOTTOM
- 2:45 **Neal L. Trubowitz** (Missouri Historical Society) A LITTLE FROM THERE, A LOT FROM HERE: MIDWESTERN ARCHAEOLOGICAL MATERIALS AT THE MISSOURI HISTORICAL SOCIETY
- 3:00 — break —
- 3:15 **Robert E. Warren** (Illinois State Museum) FRESHWATER MUSSELS FROM CAVES AND ROCKSHELTERS AT FORT LEONARD WOOD, PULASKI COUNTY, MISSOURI
- 3:30 **John Bower** (Archaeometry Lab UM-Duluth) and **Michal Kobusiewicz** (Polish Academy of Science) COMPARATIVE STUDIES OF HUNTER-GATHERER ADAPTATIONS IN EUROPE AND NORTH AMERICA: A PRELIMINARY REPORT
- 3:45 **Katie Egan** (Commonwealth Culture Resources Group) DECISIONS, DECISIONS: HUNTER-GATHERER SUBSISTENCE ADAPTATIONS IN THE SAGINAW VALLEY, MICHIGAN
- 4:00 **David Lowe** (U of Wisconsin-Madison) HOUSES OF STONE: ROCKSHELTERS OF SOUTHWESTERN WISCONSIN
- 4:15 **Carol Diaz-Granados** (Washington University) THE PETROGLYPHS AND PICTOGRAPHS OF MISSOURI: REFLECTIONS OF POWER, WEALTH, AND SEX - NOTHING'S CHANGED!
- 4:30 **Robert F. Sasso** (U of Wisconsin-Parkside) and **William G. Gartner** (UW-Madison) GARDEN BEDS, CORN HILLS, AND CORNFIELDS: CURRENT INVESTIGATIONS INTO AGRICULTURAL SITES IN WISCONSIN
- 4:45 **Lynne P. Sullivan** (New York State Museum), **Sarah Neusius** (Indiana Univ of Penn), and **Phillip Neusius** (Indiana Univ of Penn) RECONSIDERING THE EARTHWORKS OF THE LOWER GREAT LAKES

Saturday evening

- 8:00 RECEPTION [*Regency/Westminster Rooms*]
11:00 Cash bar, hors d'oeuvres

Sunday morning

WOODLAND ARCHAEOLOGY: SINGLE SITE AND REGIONAL PERSPECTIVES [*Session 10: DaVinci-Chagall Room*]

- 8:00 **Robert Jeske** (Indiana-Purdue University) RECENT INVESTIGATIONS AT THE LASALLE COUNTY HOME SITE (11-LS-14)
- 8:15 **Bret Ruby** (Glenn A. Black Laboratory), **Christine M. Shriner** (Indiana University), and **Clifford P. Ambers** (Indiana University) HOPEWELLIAN CERAMIC PRODUCTION AND EXCHANGE AT THE MANN SITE, SOUTHWESTERN INDIANA
- 8:30 **Kent Skaar** (Minnesota Historical Society) and **Kent Bakken** (Minnesota Historical Society) THE SANDON SITE VESSEL

- 8:45 **John K. White** (Ancient Lifeways Institute) THE GOLDEN EAGLE EARTHWORKS, CALHOUN COUNTY, ILLINOIS
- 9:00 **Janet G. Brashler** (Grand Valley State Univ) and **Elizabeth Garland** (Western Michigan Univ) THE ZEMAITS SITE (200T68): A STRATIFIED WOODLAND OCCUPATION ON THE GRAND RIVER IN MICHIGAN
- 9:15 **Douglas Kullen** (Patrick Archeology) BOY SCOUT CAMP - A TRANSITIONAL MIDDLE-LATE WOODLAND OCCUPATION ON THE AU SABLE RIVER IN NORTHEASTERN MICHIGAN
- 9:30 **Margot Neverett** (University of Iowa), **William Green** (Office of the State Archaeologist, Iowa), and **Mary K. Whelan** (University of Iowa) FURTHER INVESTIGATIONS OF THE WEAVER OCCUPATION AT THE GAST FARM SITE (13LA12), SOUTHEASTERN IOWA
- 9:45 — break —
- 10:00 **Billie Keaveny** (Univ of Minnesota), **Susan M. T. Myster** (Hamline University), **Ann M. Kakaliouras** (Hamline University) and **Barbara O'Connell** (Hamline University) INTENTIONAL TAPPING OF HUMAN LONG BONES FROM THREE BLACKDUCK SITES IN MINNESOTA
- 10:15 **Michael Perry** (University of Iowa) 13IW216: AN APPARENT KEYES PHASE COMPONENT IN THE AMANA LOCALITY, EASTERN IOWA
- 10:30 **Fred Finney** (Office of the State Archaeologist), **Russell Baldner** (Office of the State Archaeologist), and **E. Arthur Bettis III** (Iowa Geological Survey) THE 1993 FIELD SEASON AT THE HARTLEY FORT SITE IN NORTHEAST IOWA
- 10:45 **Michael Shott** (U of Northern Iowa) ADOPTION OF THE BOW-AND-ARROW AND TIME-DEPENDENT VARIATION IN WOODLAND "PROJECTILE POINTS" FROM THE AMERICAN BOTTOM
- 11:00 **David Stothers** (University of Toledo) THE "MICHIGAN OWASCO" AND THE IROQUOIS CO-TRADITION: LATE WOODLAND CONFLICT, CONQUEST, AND CULTURAL RE-ALIGNMENT IN THE WESTERN LOWER GREAT LAKES
- 11:15 **Tim Abel** (Western Lake Erie Arch./U. of Toledo) THE PETERSON SITE (33OT9): TWO LATE WOODLAND SANDUSKY TRADITION VILLAGES IN NORTHCENTRAL OHIO
- 11:30 **David Stothers** (University of Toledo), **Timothy J. Abel** (University of Toledo), and **Andrew M. Schneider** (University of Toledo) BEAR FORT: A STRATIFIED PREHISTORIC-PROTOHISTORIC SANDUSKY TRADITION OCCUPATION SITE

MISSISSIPPIAN MANIFESTATIONS IN THE MIDWEST [Session 11: Monarch Room]

- 8:15 **David Stothers** (University of Toledo), **Timothy J. Abel** (University of Toledo), and **Zachary C. Robinson** (University of Toledo) THE CROWN SITE: NEW PERSPECTIVES ON THE ANNUAL SETTLEMENT-SUBSISTENCE SYSTEM OF THE SANDUSKY TRADITION WOLF PHASE IN NORTHCENTRAL OHIO
- 8:30 **Mark Schurr** (Univ of Notre Dame) and **Margaret J. Schoeninger** (UW-Madison) ISOTOPIC EVIDENCE FOR VARIATIONS IN FORT ANCIENT SUBSISTENCE SYSTEMS
- 8:45 **Stephen C. Lensink** (University of Iowa) A REANALYSIS OF EASTERN INITIAL MIDDLE MISSOURI RADIOCARBON DATES AND THE IMPLICATIONS FOR THE TIMING OF LONG-DISTANCE TRADE WITH MIDDLE MISSISSIPPIAN CENTERS
- 9:00 **James M. Collins** (Office of the State Archaeologist) and **Dale R. Henning** (Loucks and Associates) THE EMERGENT MISSISSIPPIAN BONAKER PHASE OF THE OZARK RIM
- 9:15 **Robert Mainfort Jr** (Memphis State University) THE GRAVE LAKE SITE AND LATE MISSISSIPPIAN CHRONOLOGY IN THE CENTRAL MISSISSIPPI VALLEY
- 9:30 **Stephen Ball** (Glenn A. Black Lab of Archaeology) THE RAY SITE: ANGEL PHASE MORTUARY BEHAVIOR AT AN OUTLYING SITE

9:45 — *break* —

- 10:00 **Lawrence A. Conrad** (Western Illinois University) TWO ELABORATE EVELAND/STIRLING HORIZON MIDDLE MISSISSIPPIAN GRAVES FROM THE KINGSTON LAKE SITE, PEORIA COUNTY, ILLINOIS
- 10:15 **Robert J. Salzer** (Beloit College) THE EMERGENCE OF MISSISSIPPIAN ART
- 10:30 **Rochelle Lurie** (MARS) ROBINSON RESERVE REVISITED
- 10:45 **David J. Nolan** (WIU Archaeological Research Lab) and **Lawrence A. Conrad** (Western Illinois University) ONEOTA OCCUPATIONS ALONG THE MISSISSIPPI VALLEY IN WEST CENTRAL ILLINOIS
- 11:00 **Robert Boszhardt** (Mississippi Valley Archaeology Center) TURQUOISE, RASPS, AND HEARTLINES: THE ONEOTA BISON PULL
- 11:15 **Carol I. Mason** (U of Wisconsin-Fox Valley) PAUL RADIN'S ARCHAEOLOGY

MEETING OF THE SAA NETWORK COORDINATORS [*Regency Room*]

- 8:00 **Bonnie Christensen** (Mississippi Valley Archaeology Center), Chair
- 9:00

HISTORICAL ARCHAEOLOGY: FUR TRADE AND EURO-AMERICAN SITES [*Session 12: Regency Room*]

- 9:00 **Carol L. Mason** (UW-Oshkosh/Milwaukee) 1993 EXCAVATIONS AT THE GRIGNON MANSION (47-OU-115), KAUKAUNA, WISCONSIN
- 9:15 **Robert A. Birmingham** (State Historical Society of Wisconsin) PRAIRIE INCISED TO IRONSTONE: INVESTIGATIONS AT THE BRISBOIS HOUSE, VILLA LOUIS HISTORIC SITE
- 9:30 **John Jensen** (State Historical Society of Wisconsin) FIRE ON THE LAKE: A PRELIMINARY REPORT ON THE NON-DISTURBANCE HISTORICAL ARCHAEOLOGICAL SURVEY OF THE STEAM VESSEL NIAGARA
- 9:45 **Charles Rohrbaugh** (Archaeological Consultants) 1993 EXCAVATIONS AT THE GRAND VILLAGE OF THE ILLINOIS STATE HISTORIC SITE
- 10:00 — *break* —
- 10:15 **Tom Pleger** (U of Wisconsin-Madison) GREEN ISLAND LIGHT-STATION (47-MT-128), A SYNTHESIS OF RELATED HISTORICAL AND ARCHAEOLOGICAL RESEARCH AT A LIGHTHOUSE LOCATED ON GREEN ISLAND IN THE BAY OF GREEN BAY
- 10:30 **Fred Finney** (Office of the State Archaeologist) IDENTIFICATION AND SIGNIFICANCE OF A SINGLE FAMILY, SHORT-TERM EURO-AMERICAN OCCUPATION DURING THE MID- TO LATE-NINETEENTH CENTURY AT THE HEROD SITE (13DB62), DUBUQUE COUNTY, IOWA
- 10:45 **Keith A. Sverdrup** (U of Wisconsin-Milwaukee) and **David F. Overstreet** (GLARC) APPLICATION OF ELECTRICAL RESISTIVITY SURVEYING TO THE LOCATION OF GRAVE SITES
- 11:00 **Patricia Richards** (GLARC) EXCAVATIONS AT THE MILWAUKEE COUNTY INSTITUTION GROUNDS ALMSHOUSE CEMETERY
- 11:15 **Jennifer R. Haas** (Univ. of South Carolina) VERTEBRAL PATHOLOGY IN THE MCIG POPULATION: A PRELIMINARY ANALYSIS

ANNUAL MEETING OF THE MIDWEST ARCHAEOLOGICAL CONFERENCE

- 11:45 **Lynne Goldstein & Elizabeth Benchley**, Chairs — *Monarch Room*
- 12:00

Abstracts of Papers

Tim Abel (Western Lake Erie Arch./U. of Toledo) **THE PETERSON SITE (330T9): TWO LATE WOODLAND SANDUSKY TRADITION VILLAGES IN NORTHCENTRAL OHIO** [Session 10]

For the past five years, the University of Toledo has been involved in extensive salvage excavations of the Peterson Site (330T9). Excavations have concentrated on two large horizontally overlapping Late Woodland village sites belonging to the Sandusky Tradition. The earlier of these two villages is culturally and temporally associated with the Wolf Phase (ca. 1250 - 1450 AD), a period marked by a rapid territorial expansion into southwestern Ontario and southeastern Michigan. Cultural features have yielded a large ceramic sample of 500+ vessels, making possible for the first time a concrete seriation for the Parker Festooned ceramic type. The later village is associated with the protohistoric Indian Hills Phase (ca. 1550-1642 AD), the terminal phase of the Sandusky Tradition. This component has yielded some of the earliest radiocarbon dates for protohistoric trade connections in the Lower Great Lakes.

Timothy J. Abel (University of Toledo) — see **David Stolbers**

Steven R. Abler (University of Illinois) — see **Bonnie W. Styles**

Clifford P. Ambers (Indiana University) — see **Bret Ruby**

Dean L. Anderson (Bureau of Michigan History) and **Beverly A. Smith** (Michigan State University) **UTILITY TRENCH ARCHAEOLOGY: A MIDDLE HISTORICAL-PERIOD ASSEMBLAGE FROM MACKINAW CITY, MICHIGAN** [Session 4]

In the fall of 1992, archaeologists recovered a small assemblage of artifacts from the backdirt of a utility trench in Mackinaw City, Michigan. The assemblage is made up of European trade goods and bone and antler implements which probably date to the late seventeenth or early eighteenth century. The artifacts were confined to a tightly circumscribed part of the backdirt pile suggesting that the utility trench had hit an historical-period Native American storage feature. This paper focuses upon the bone and antler implements in the assemblage and the insight they offer into traditional native technology in the Straits of Mackinac area.

Joseph Alan Artz (University of Iowa) **GEOARCHAEOLOGICAL OBSERVATIONS OF BURIED ARCHAEOLOGICAL COMPONENTS IN LOESS-MANTLED TERRAINS OF IOWA** [Session 2]

Numerous shallowly buried archaeological components have been identified in the loess-mantled upland landscapes of Iowa. Data from three sites provide examples of cultural stratigraphy in the loess mantle. At 13VB104, Late and Early Woodland components are vertically stratified in the upper 60 cm of the surface soil. At 13RN59 and 13MR267, prehistoric occupation surfaces provide evidence for slope evolution and pedogenesis during the Holocene. At all three sites, pedoturbation has dispersed artifacts from former land surfaces. The data from Iowa are consistent with current models of upland landscape evolution and pedogenesis during the Holocene in the Midwest.

Karen Atwell (Center for American Archaeology) and **Daniel B. Goatley** (Center for American Archaeology) **STUDIES OF TERMINAL ARCHAIC/EARLY WOODLAND SETTLEMENT AND ACTIVITIES IN THE NORTHERN SYN DRAINAGE, ILLINOIS** [Session 5]

The Jimson Ridge/Dickhut sites are located southwest of Quincy, Illinois on an alluvial terrace west of a backwater lake nestled at the base of the bluff in the Mississippi River Valley floodplain. Based on three Kampsville Barbed projectile points recovered from an intact midden, the sites appear to represent a Terminal Archaic/Early Woodland activity area. From excavations at the site the activities appear to have fluctuated with the lake water level which spatially separated the deposits into discreet pockets. An attempt will be made to compare the data obtained from these excavations to other sites within the region.

Kent Bakken (Minnesota Historical Society) — see **Kent Skaar**

Russell Baldner (Office of the State Archaeologist, Iowa) — see **Fred Finney**

Stephen Ball (Glenn A. Black Lab of Archaeology) **THE RAY SITE: ANGEL PHASE MORTUARY BEHAVIOR AT AN OUTLYING SITE** [Session 11]

Knowledge of Angel Phase mortuary behavior is almost entirely derived from excavations at the Angel site (12Vg1), a large stockaded Middle Mississippian village in southwest Indiana and the preeminent center of the Angel phase. The nature of mortuary activities at outlying sites remained problematic due to a lack of published material. Excavations at the Ray site (12W6) have revealed a complex of different burial treatments within an Angel phase cemetery. This excavation combined with evidence from the Shoulders site (12W57) and the Angel site provide a basis for comparison to the better documented mortuary traditions of neighboring Mississippian polities.

Jan Beaver (Winnebago Nation) — see **James P. Schertz**

Jeffery Behm (U of Wisconsin-Oshkosh) **COMMUNITY PLAN OF THE BELL SITE (47-WN-9), THE GRAND VILLAGE OF THE MESQUAKIE** [Session 4]

The Bell Site, located on the south shore of Lake Butte des Morts in east-central Wisconsin, was the location of the Grand Village of the Mesquakie between approximately 1680 and 1730. The French besieged this fortified village in 1716. Additional expeditions were sent in 1728 and 1730. The site was excavated in 1959 by the State Historical Society and since 1990 by the University of Wisconsin-Oshkosh. The community plan has been partially reconstructed based on the location of excavated storage and refuse pits, post molds, houses, and stockade trenches.

Elizabeth Benchley (U of Wisconsin-Milwaukee) **MELVIN FOWLER: FOUR DECADES OF CAHOKIA ARCHAEOLOGY** [Session 1]

Melvin L. Fowler's long term involvement in Cahokia archaeology has included continuing research, publication, and service. This paper reviews Fowler's contributions to evolving understandings of the structure and development of the Cahokia community and its region. The paper also addresses his efforts to insure the protection and wise management of the site's resources by encouraging archaeologists and bureaucrats to share information and clarify management goals.

E. Arthur Betts III (Iowa Geological Survey) — see **Fred Finney**

Robert A. Birmingham (State Historical Society of Wisconsin) **PRAIRIE INCISED TO IRONSTONE: INVESTIGATIONS AT THE BRISBOIS HOUSE, VILLA LOUIS HISTORIC SITE** [Session 12]

The Villa Louis Historic Site, administered by the State Historical Society of Wisconsin (SHSW), is a large complex of archaeological sites and historic buildings. The SHSW has begun a systematic archaeological survey and other investigations of the grounds. Recent work concentrated on the area of the 19th century Brisbois House in conjunction with rehabilitation projects. Excavations revealed an extensive Woodland occupation and mortuary site, fur trade era deposits, and the foundations of a large undocumented outbuilding, possibly a summer kitchen.

Donald Blakeslee (Wichita State University) **CHRONOLOGICAL AND STYLISTIC ANALYSIS OF CAHOKIAN INFLUENCES IN THE CENTRAL GREAT PLAINS** [Session 3]

The nature of Cahokian influences in the Central Plains has long been the subject of debate. In this paper, I use probabilistic analysis of radiocarbon dates and stylistic analysis of ceramics to document two patterns, one involving the Steed-Kisker complex and the other embracing the Nebraska and Smoky Hill phases along with scattered sites. The Steed-Kisker pattern emerges first and is coeval with the Stirling phase at Cahokia. The Nebraska/Smoky Hill pattern begins later. Neither appears to reflect a migration from the Cahokian center.

Robert Boszhardt (Mississippi Valley Archaeology Center) **TURQUOISE, RASPS, AND HEARTLINES: THE ONEOTA BISON PULL** [Session 11]

Several explanations have been put forth concerning the Oneota abandonment of the Ia Crosse terrace system in protohistoric times. Key to understanding this phenomena is the shift from the Mississippi River floodplain to plains settings. This presentation discusses

several tantalizing lines of evidence to suggest that the Oneota settlement shift to the west was due in part to the appeal of bison hunting that was enhanced by a pan-plains exchange network that, in effect, linked Oneota and southwestern Pueblo societies.

John Bower (Archaeometry Lab UM-Duluth) and **Michał Kobusiewicz** (Polish Academy of Science) **COMPARATIVE STUDIES OF HUNTER-GATHERER ADAPTATIONS IN EUROPE AND NORTH AMERICA: A PRELIMINARY REPORT** [Session 9]

Since 1985, the authors of this paper have been engaged in a comparative study of hunter-gatherer responses to changing environments in the northcentral United States and the North European Plain between about 12,000 and 5,000 BP. The study includes comparisons at both a regional scale, essentially based on published work by others, and a local scale, involving collaborative excavation of sites in Iowa and Poland. The project is thus both a theoretical study of adaptation and a methodological experiment. In this paper, we summarize the results to date in both of these arenas.

Janet G. Brasler (Grand Valley State Univ) and **Eltzabeth Garland** (Western Michigan Univ) **THE ZEMAITIS SITE (200T68): A STRATIFIED WOODLAND OCCUPATION ON THE GRAND RIVER IN MICHIGAN** [Session 10]

Deep test excavations conducted during the summer of 1993 at the Zemaitis Site (200T68) revealed buried deposits with excellent preservation. The primary sediments appear to be aeolian sands derived from an inland dune rather than alluvial deposits suggested by the site location along the Grand River. A major transitional Middle to Late Woodland component is present in addition to an aceramic component. A series of radiocarbon dates from Zemaitis date both occupations and link the area investigated in 1993 to excavations conducted during the 1970s. This paper introduces the stratigraphy, material culture, chronology, and research potential of the Zemaitis Site.

James A. Brown (Northwestern University) **FROM MOUNDS TO CEMETERIES: CONTINUITY AND CHANGE IN ONEOTA MORTUARY PRACTICES** [Session 6]

Reviews of Oneota developments in the Prairie Peninsula since A.D. 1000 have largely side-stepped the matter of social and cultural change as registered through trends in mortuary treatment. Certain patterns are beginning to emerge that have relevance to ongoing discussions about changes in hunting, agricultural, and warfare practices. It is the subject of this paper to assess some of the social and cultural implications within a review of the extant record.

Richard Brown (Winnebago Nation) — see **James P. Scherz**

Bill Byrd (Kent State Univ) — see **Ronald L. Collins**

Bonnie Christensen (Mississippi Valley Archaeology Center) **MISSISSIPPI VALLEY ARCHAEOLOGY CENTER'S "ARCHAEOLOGY IN EDUCATION PROGRAM"** [Session 7]

Mississippi Valley Archaeology Center, University of Wisconsin-La Crosse, is actively involved in bringing the science of archaeology and the pre-European history of the Upper Mississippi River Valley to the region's precollegiate population through its "Archaeology in Education Program." This program provides teacher training through workshops, classes, and field trips, as well as classroom use of resource boxes, book boxes, and teacher guides. The program is creating future citizens who have an awareness of and sensitivity to archaeology as well as teachers who are currently reporting new sites, providing an extended network of contacts for professional archaeologists, and helping to preserve sites.

Nick Clark (Minnetrasta Cultural Center) **THE MINNETRASTA COUNCIL: A CULTURAL NETWORK FOR THE WOODLAND PEOPLE** [Session 7]

In 1990, the Minnetrasta Cultural Center initiated a small project with the Miami Indians of Indiana; from that initial endeavor has grown the Minnetrasta Council for Great Lakes Native American Studies that includes 20 Woodland tribes who are living or once lived between the Ohio River and the Great Lakes. Perhaps the most important aspect of the Council's activities is the network created among the tribes. This paper will discuss the development of the consortium, its present projects, and its emerging role in the future of the Woodland people.

Charles E. Cleland (Michigan State University) and **David Ruggles** (Michigan State University) **THE SAMELS FIELD SITE: AN EARLY ARCHAIC BASE CAMP IN NORTHWEST LOWER MICHIGAN** [Session 5]

Insights into the broad range of both tool manufacture and subsistence endeavors of an Early Archaic base camp in the upper Great Lakes are afforded by the Samels Field Site. This site has been dated between 10,000 BP and 8,000 BP by means of geochronology and point typology. The lithic tool assemblage produced on Norwood, Bayport, and glacial cherts provides further information on both mobility and raw material usage patterns of the prehistoric residents. Additionally, Plano styled lanceolate projectile points of a unique type are described, and their regional stylistic relationships are discussed.

James M. Collins (Office of the State Archaeologist) and **Dale R. Henning** (Loucks and Associates) **THE EMERGENT MISSISSIPPIAN BONAKER PHASE OF THE OZARK RIM** [Session 11]

Excavations at the type site, 23JE400, are reviewed to contrast coeval settlement patterns of the Ozark Rim, Crescent Hills locality, and those of the American Bottom. The Bonaker phase, radiocarbon dated to AD 1050, exhibits an admixture of American Bottom Emergent Mississippian and indigenous Late Woodland traits. Site structure is similar to American Bottom Emergent Mississippian communities, particularly those of the Prairie Lake locality. However, stone-box graves arranged in circumscribed cemeteries are a conspicuous component of the phase, and predate the introduction of stone-box graves to the American Bottom by over a century.

Ronald L. Collins (Kent State Univ/Cleveland Museum) and **Bill Byrd** (Kent State Univ) **MORPHOLOGY, FUNCTION, AND USE LIFE: AN EVALUATION OF THE PALEO CROSSING SCRAPER ASSEMBLAGE** [Session 5]

An assemblage of Paleo Indian scrapers (n=196) from the Paleo Crossing Site (33Me274), Medina County, Ohio is examined. A suite of linear, angular, and polar metrics quantifies attributes of morphology, function, and macroscopic use wear. A principle components analysis is utilized to describe the variation within the assemblage. Cluster analysis is used to partition variation to create a functional typology based on geometric distances within and between attribute clusters. Behavioral explanations which account for variation and attribute clustering in this assemblage are advanced.

Lawrence A. Conrad (Western Illinois University) **TWO ELABORATE EVELAND/STIRLING HORIZON MIDDLE MISSISSIPPIAN GRAVES FROM THE KINGSTON LAKE SITE, PEORIA COUNTY, ILLINOIS** [Session 11]

Two multiple graves salvaged at the Kingston Lake site in the 1930's are described and analyzed. Grave One with two decapitated and one scalped individual, as well as artifacts and ecofacts, is interpreted as a fertility shrine. Grave Two with one individual with rich furnishings and another individual with nothing is interpreted as a status individual with a retainer. The structure of the mound with large rectangular pits containing multiple burials cutting into it and the presence of an exceptional chunky stone, an arrowhead cache and a large quantity of beads as well as decapitated people invites comparison with Cahokia Mound 72.

Lawrence Conrad (Western Illinois University) — see **David J. Nolan**

Carol Diaz-Granados (Washington University) **THE PETROGLYPHS AND PICTOGRAPHS OF MISSOURI: REFLECTIONS OF POWER, WEALTH, AND SEX - NOTHING'S CHANGED!** [Session 9]

A statewide inventory of petroglyph and pictograph sites have been completed under a NSF grant. Approximately half of the 134 sites were used to work out a tentative style analysis. Three major rock graphic styles have been identified. Study of the frequency of occurrence of motifs, their associations, and distributional patterns had generated new information on the possible functions of these sites, including that of areas of information exchange. Although we cannot yet tie Missouri's rock graphic sites to specific prehistoric groups, associations to peoples who are on record as sharing linguistic stocks and mythologies with the state's early historic Native Americans offer intriguing possibilities that are preliminarily explored.

Clark A. Dobbs (Institute for Minnesota Archaeology) **RECONSTRUCTING THE MOUNDS OF ROCK COUNTY AND THE NORTHWESTERN ARCHAEOLOGICAL SURVEY RECORDS** [Session 8]

The records of the Northwestern Archaeological Survey are an invaluable resource for recreating groups of mounds and earthworks that have now vanished or which have not been examined in recent years. In 1991, IMA staff recreated a series of 18 mound groups in Rock County, WI for use in a larger mound inventory project in that county. This paper reviews the methods and results of this redrafting project. The mounds of Rock County are distinctive and the paper also discusses the value of the NWAS records in

comparing differences in mound form and composition through time and space.

Katie Egan (Commonwealth Culture Resources Group) DECISIONS, DECISIONS: HUNTER-GATHERER SUBSISTENCE ADAPTATIONS IN THE SAGINAW VALLEY, MICHIGAN [Session 9]

Over the past twenty years, hunter-gatherer studies have focused on the role of efficiency, taste, and prestige on subsistence decision making, but there has been no systematic consideration of the relative importance of these goals in different contexts. Nor has there been a serious effort to integrate the division of labor into the decision-making process. Through the use of a multiple modeling approach, the role of these factors on short- and long-term subsistence decision making is examined within the context of the Late Archaic, Early Woodland, and Middle Woodland periods in the Saginaw Valley of Michigan.

Duane Esarey (Dickson Mounds Museum) and **Mark Esarey** (Univ of Kentucky) EVIDENCE FOR MANUFACTURE OF 19TH CENTURY, POINT PLEASANT-STYLE TOBACCO PIPES IN ILLINOIS [Session 4]

A well-documented series of distinctive tobacco pipes were manufactured ca. 1840-1890 at the Point Pleasant kilns in Clearmont County, Ohio. Although discreet seriation has yet to be achieved, it is clear that the more than eighty individual styles of Point Pleasant pipes are highly specific chronological indicators. In fact, Point Pleasant-style pipes are "horizon-markers" of the middle to late 19th century at locations as far away as California and Oregon. Regardless of their ultimate point of deposition, Point Pleasant-style pipes are generally assumed to have been manufactured in the Clearmont County, Ohio region. A growing body of evidence indicates that very similar pipes were also manufactured in Illinois.

Mark Esarey (Univ of Kentucky) — see **Duane Esarey**

Bryant Evans (University of Illinois-Urbana) — see **Douglas K. Jackson**

Fred Finney (Office of the State Archaeologist, Iowa) IDENTIFICATION AND SIGNIFICANCE OF A SINGLE FAMILY, SHORT-TERM EURO-AMERICAN OCCUPATION DURING THE MID- TO LATE-NINETEENTH CENTURY AT THE HEROD SITE (13DB62), DUBUQUE COUNTY, IOWA [Session 12]

Phase III excavations were conducted at the Herod site (13DB62) in the Mines of Spain Recreation Area near Dubuque, Iowa. The site has an apparent single family, short-term Euro-American occupation during the mid- to late-nineteenth century. This component consists of a soft-mud brick and timber habitation structure that burned, leaving sealed floor and cellar deposits. Destruction of this house dates to circa 1880. Recovered artifacts indicate a middle-class residence. The house was possibly a weekend retreat, summer residence, or both. The occupants also engaged in part-time lead mining or collecting activities. The site provides new information on nineteenth century rural life in the Upper Mississippi Valley lead mining region.

Fred Finney (Office of the State Archaeologist, Iowa), **Russell Baldner** (Office of the State Archaeologist, Iowa), and **E. Arthur Bettis III** (Iowa Geological Survey) THE 1993 FIELD SEASON AT THE HARTLEY FORT SITE IN NORTHEAST IOWA [Session 10]

Hartley Fort is a palisaded Late Woodland village with evidence of extensive long distance contacts with sites in the Mississippi River Valley and northwest Iowa. This site is part of the exchange network referred to as Calloquia's Northern Hinterland that existed in the Upper Mississippi Valley from AD 1000 to 1200. The long distance contacts were made for information and prestige items. This paper presents a preliminary report on the 1993 excavations. Three findings on the Late Woodland Hartley phase highlight the new investigations: floral and faunal exploitation, geomorphological setting, and site facilities such as a basin structure and a palisade ditch.

Fred Finney — see **Cynthia L. Peterson**

James G. Foradas (Ohio State University) NORMATIVE MINERAL COMPOSITION VARIATION IN PENNSYLVANIAN AGE CHERTS (FLINTS) FROM SEVERAL QUARRIES USED BY OHIO HOPEWELL: REPORT OF PROGRESS AND IMPLICATIONS FOR ONGOING RESEARCH [Session 2]

Over 200 samples of fresh and heat-treated chert (flint) from outcrops near prehistoric quarries in the Upper Mercer, Zaleski, Vanport,

and Brush Creek formations were chemically analyzed using ICP Spectrometry. Concentrations of nine common elements in the cherts were converted to quantities of "Normative" minerals (feldspars, carbonates, hydroxides) known to be in the cherts due to their geology. Variation in quantities and associations of normative minerals in cherts helped distinguish between "look-alike" cherts from different sources. The method and implications of the results for Scioto Hopewell chert acquisition will be discussed.

Gayle Fritz (Washington University) — see **Timothy Pauketat**

Elizabeth Garland (Western Michigan University) — see **Janet G. Brasler**

William G. Gartner (UW-Madison) — see **Robert F. Sasso**

Daniel B. Goatley (Center for American Archaeology) — see **Karen Atwell**

William Green (Office of the State Archaeologist, Iowa) — see **Margot Neverett**

Bonnie L. Gums (Southern Illinois U at Edwardsville) — see **Brad H. Koldehoff**

Jennifer R. Haas (Univ. of South Carolina) VERTEBRAL PATHOLOGY IN THE MCIG POPULATION: A PRELIMINARY ANALYSIS [Session 12]

From August 1991 through November 1992, Great Lakes Archaeological Research Center recovered 1649 human burials from the Milwaukee County Institutional Grounds, a historic cemetery located in Wauwatosa, Wisconsin. A total of 367 adult burials, excavated during the 1991 field season, were examined for vertebral pathologies. Osteophytosis, Schmorl's nodes, collapse fractures, and Kippel Fiel syndrome were represented within the adult population. Preliminary analysis of degenerative changes indicates the thoraco-lumbar region as the area subject to the most stress. The localization of degenerative changes in this region suggests certain types of activity patterns during life of paupers living in the turn of the century Milwaukee. The presence of Kippel Fiel among a small percentage of the adults provides further information concerning the nature of life for the paupers.

Steven Hackenberger (U of Wisconsin Centers) EFFIGY MOUNDS IN GLOBAL PERSPECTIVE [Session 8]

By comparing interpretations of social monuments in North America and Europe we can better establish the global significance of Late Woodland effigy mounds and their builders. A recent synthesis regarding interpretations of European monuments by Renfrew and Bahn (1991) is used to review research questions pertaining to Woodland mounds. The synthesis proceeds from speculative and descriptive chronological studies; to the explanatory efforts of functionalists, "Neo-marxian" structuralists, and "post-processualists." This review helps to question some of our fundamental assumptions, such as our interpretation of monuments as markers of cultural florescence as opposed to cultural demise. The radical nature of some hypotheses and research questions is an additional measure of the significance of effigy mounds and the need to preserve and protect this record of Native American societies.

Steven Hackenberger (U of Wisconsin Centers) and **He Ping** (Winnebago Nation GIS Dept) GIS MODELS OF EFFIGY MOUND LOCATIONS [Session 8]

A pilot GIS project was undertaken with the support of a State Historical Society of Wisconsin subgrant in order to characterize the locations of existing and destroyed mounds in Dane County. Mound locations and historic vegetation cover were digitized. Existing digitized soil and hydrological data were used. ArcInfo buffer analysis suggests that marsh (when combined with certain types of oak cover) is often associated with mound locations, as are some types of soil associations. Maps that overlay these vegetation and soil types illustrate areas with high probabilities for mound discovery.

Robert L. Hall (U of Illinois at Chicago) WHAT IS MESOAMERICAN DIRECTIONAL SYMBOLISM DOING IN NEBRASKA? [Session 1]

In 1913, Marcel Mauss observed a contradiction in published reports of Omaha directional symbolism that related sky and earth to the directions north and south for the positions of Omaha Sky and Earth moieties in the camp circle, but the reverse of these associations in the Omaha Shell Society ritual. This contradiction is explained by relating the directional symbolism of Omaha

moieties to that associated with Mesoamerican cosmologies that developed south of the Tropic of Cancer and the directional symbolism of the Shell Society to cosmologies appropriate to regions north of the Tropic of Cancer, where the sun never appears in the northern sky at midday.

Holly Halverson (MVAC) — see **Jodie O'Gorman**

Michael L. Hargrave (Center for Archaeological Investigations) and **Jeanette E. Stephens** (Center for Archaeological Investigations) **HOPEWELL AND CRAB ORCHARD: THE MIDDLE WOODLAND PERIOD IN SOUTHERN ILLINOIS [Session 1]**

The Middle Woodland period in southern Illinois is best known for the Crab Orchard Tradition, but several Hopewellian mound centers and related sites are located within the lower Wabash and Mississippi River valleys. Melvin Fowler's reports of excavations conducted at the Wilson and Rutherford Mounds during the early 1950's continue to provide our best view of Hopewellian mortuary patterns in the region. Subsequent Middle Woodland research, which has focused primarily on Crab Orchard habitation sites in and near the Southern Till Plain, indicates very limited participation in Hopewellian interregional exchange or mortuary ceremonialism by Crab Orchard groups in the interior.

Dale R. Henning (Loucks and Associates) — see **James M. Collins**

Zennie Herring (Cahokia Mounds Museum Society) and **Al Meyer** (Cahokia Mounds Museum Society) **THE ROLE OF THE SUPPORT ORGANIZATION [Session 7]**

Using Cahokia Mounds Museum Society as an example, this paper will examine the role of an archaeological park's support organization in promoting the mission and objectives of their site. At Cahokia, programs are focused toward providing a non-threatening opportunity for different cultures to explore questions and problems about cultural differences without the loss of individual diversity. Conflicts between cultural groups, the prehistoric site, the managing agency, and the support organization should be resolved in a manner that will not diverge from the mission of the site.

Michael J. Higgins (University of Illinois-Urbana) — see **Douglas K. Jackson**

Brian W. Hoffman (UW-Madison) — see **James E. Myster**

Bill Iseminger (Cahokia Mounds State Historic Site) **THE CAHOKIA STOCKADE: A STUDY OF FORTIFICATION FORM AND FUNCTION [Session 3]**

Aerial photography, excavations, and remote sensing have identified several segments of the Cahokia Stockade. A history of the research will be presented, including estimates of time, labor and materials involved in construction, proposed routes, and a possible dual social/defensive function. Socio-political implications will also be explored.

Douglas K. Jackson (University of Illinois-Urbana), **Bryant Evans** (University of Illinois-Urbana), and **Michael J. Higgins** (University of Illinois-Urbana) **AN OVERVIEW OF THE UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN'S INVESTIGATIONS ALONG THE I-55 ARCHAEOLOGICAL PROJECT ALIGNMENT IN THE AMERICAN BOTTOM [Session 9]**

The University of Illinois at Urbana-Champaign has recently initiated investigations along the proposed I-55 interstate corridor in the northern American Bottom. This project consists of a 7.5 mile corridor that transects a variety of topographic/environmental settings. A total of 18 sites have been identified along the project alignment, ranging from small lithic scatters to really extensive, multi-component, dense scatters. Many of the sites have the potential to yield buried cultural deposits. Prehistoric components range from early Archaic to Mississippian and several pre-Civil War historic farmsteads are also present.

John Jensen (State Historical Society of Wisconsin) **FIRE ON THE LAKE: A PRELIMINARY REPORT ON THE NON-DISTURBANCE HISTORICAL ARCHAEOLOGICAL SURVEY OF THE STEAM VESSEL NIAGARA [Session 12]**

This paper will discuss the State Historical Society of Wisconsin/University of Wisconsin Sea Grant underwater archaeological survey of the 1845 sidewheel steam vessel Niagara. When built, the Niagara was the second largest steam vessel on the lakes, and one of the largest in the world. Little data exists on this class of ship and the Niagara wreck provides a rare opportunity to study poorly understood but significant chapters in mid-nineteenth century transportation history, marine architecture, and engineering. The paper will include a brief discussion on methodology followed by a preliminary analysis of the site's historic and archaeological significance.

Robert Jeske (Indiana-Purdue University) RECENT INVESTIGATIONS AT THE LASALLE COUNTY HOME SITE (11-LS-14) [Session 10]

Indiana-Purdue University Fort Wayne excavated at the LaSalle County Home Site (11-LS-14), on the Upper Illinois River. Approximately 11 acres of the site survives, and materials date from the Middle Woodland through Mississippian time periods. Test units revealed an apparent Middle Woodland house floor and associated debris. Pit features, post holes, and dense midden yielded a large collection of lithic, ceramic, floral, and faunal data. Excavations were conducted as part of the Grand Village Archaeological Project to complement and add a regional perspective to work undertaken at the Grand Village of the Illinois, five kilometers downstream.

Larry Johns (Winnebago Nation GIS Department) INVENTORY AND MAPPING DANE AND ROCK COUNTY EFFIGY MOUNDS [Session 8]

The Rock County Mounds Project was initiated by the Wisconsin Winnebago Nation in 1992 with a State Historical Society of Wisconsin subgrant. Some 16 mound site records were found to be duplicates. Only 87 mounds have been identified to this point and these are generally in poor condition. Effigies remain at only six sites: Indian Hill, Beloit College, Henderson, Strong/Partridge, Tay-E-He-Dah, and Hillcrest/Beloit Junction sites. The project incorporated the author's experience with the Dane County Indian Mounds Identification Project into the Winnebago Tribe's recently initiated GIS Department and helped to train tribal members.

Ann M. Kakalouras (Hamline University) — see **Billie Keaveny**

Billie Keaveny (Univ of Minnesota), **Susan M. T. Myster** (Hamline University), **Ann M. Kakalouras** (Hamline University), and **Barbara O'Connell** (Hamline University) INTENTIONAL TAPPING OF HUMAN LONG BONES FROM THREE BLACKDUCK SITES IN MINNESOTA [Session 10]

"Tapping", or perforation of human long bones has been observed by researchers throughout the Midwest. Explanations for such skeletal modifications have included marrow extraction and/or cannibalism, spirit release, and skeletal mutilation to prevent soul return. The frequency of long bone tapping was determined from 164 individuals from three Blackduck sites (ca. 800 - 1400 AD) in Minnesota. The frequency and nature of tapping by site, sex, age, and bone affected were investigated. Explanations for long bone tapping were evaluated in light of the results and consideration of ethnographic accounts of Native American beliefs regarding death and the human soul.

John E. Kelly (SIU-E) THE DISCOVERY, DEBATE, AND DESTRUCTION OF AMERICAN BOTTOMS MOUNDS: A PRELUDE TO THE PRESERVATION OF CAHOKIA MOUNDS [Session 3]

The eighteenth and early nineteenth century recognition of mound groups in the American Bottom region initially attributed these monuments to the ancestors of native groups. Despite this earlier perspective the popular notion of a foreign race of "mound builders" dominated the nineteenth century. Another alternative perpetuated by local scholars, such as the geologist Worthen, attributed the mounds to the forces of nature. The latter theory had a considerable negative impact with the destruction of such mounds as the Big Mound in St. Louis. This paper will discuss the history of the mounds at Cahokia in the twentieth century.

Lucretia Kelly (Washington University) — see **Timothy Pauketat**

Michal Kobusiewicz (Polish Academy of Science) — See **John Bower**

Brad H. Koldehoff (Southern Illinois U at Edwardsville), **Bonnie L. Gums** (Southern Illinois U at Edwardsville),

and **Charles O. Witty** (Southern Illinois U at Edwardsville) **RECENT INVESTIGATIONS ALONG THE KASKASKIA TRAIL IN MONROE COUNTY, ILLINOIS** [Session 9]

The Kaskaskia Trail linked early historic settlements, like Kaskaskia, New Design, and Cahokia, and was undoubtedly a well-established aboriginal footpath of some antiquity. The trail's upland route, taken most frequently during wet weather, is today the same course that is followed by Illinois Route 3. An expansion and realignment of Route 3, between Columbia and Waterloo, provides an opportunity to examine the nature of historic and prehistoric settlements along a section of the trail's upland route. Recent phase III excavations are summarized and preliminary interpretations about changing patterns of land use are presented.

Paul P. Kretsa (University of Illinois-Urbana) **A NEW LOOK AT AN OLD PROBLEM: THE FUNCTION OF MOUNDS IN ONEOTA SOCIETY** [Session 6]

Robert Hall, in his classic *The Archeology of Carcajou Point*, summarized information on the burial mounds by Oneota phases in eastern Wisconsin. This paper revisits this area of research, focusing on three main issues; first, information on Oneota burial mounds; second, their spatial and temporal context; and third, implications for the development of Oneota cultures in eastern Wisconsin. Evidence for the Oneota use of burial mounds at Carcajou Point, Lasley's Point, and Walker-Hooper is detailed. A key to this discussion are possible changes in Oneota burial practices through time in eastern Wisconsin, and the implications of those changes for the development of Oneota society.

Douglas Kullen (Patrick Archeology) **BOY SCOUT CAMP - A TRANSITIONAL MIDDLE-LATE WOODLAND OCCUPATION ON THE AU SABLE RIVER IN NORTHEASTERN MICHIGAN** [Session 10]

Excavations were conducted in 1992 at Boy Scout Camp (20IS97), on the Au Sable River in northeastern Michigan's Huron National Forest. The site produced large stemmed knives and small side-notched arrowpoints. Organic residues on Wayne Tradition ceramics yielded an AMS date of 1430±80 B.P. Fish processing was the major subsistence activity on site, but small game hunting and maple sugar processing are also represented. The site extends the antiquity of the Chippewa settlement pattern back to the early Late Woodland Period, and demonstrates the time lag and latitudinal geographic range of Middle Woodland manifestations in the Great Lakes region.

Suzanne Kutterer-Siburt (Cahokia Mounds) **ARCHAEOLOGY/EDUCATION CANNOT EXIST IN A VACUUM** [Session 7]

Public archaeology programs do not and cannot exist in an archaeological vacuum. Many factors influence and shape the program. This program examines the demands and restrictions placed on archaeologists conducting public programs, the responsibility of ensuring that public programs are professionally and culturally correct, and the positive impact of these programs on the profession of archaeology.

Mary L. Kwas (Chucalissa Archaeological Museum/MSU) **ARCHAEOLOGY AND PUBLIC EDUCATION: AN INTRODUCTION TO THE DIVERSITY** [Session 7]

Public education in archaeology has now been around long enough for programs to be heading in many directions, reaching many audiences through different contexts. As an introduction to the symposium, this paper will present an overview of some of these programs and directions. Examples of specific programs from Chucalissa Archaeological Museum in Memphis, Tennessee, will be shown as illustration.

Stephen C. Lensink (University of Iowa) **A REANALYSIS OF EASTERN INITIAL MIDDLE MISSOURI RADIOCARBON DATES AND THE IMPLICATIONS FOR THE TIMING OF LONG-DISTANCE TRADE WITH MIDDLE MISSISSIPPIAN CENTERS** [Session 11]

Reanalysis of previously collected C14 dates from Initial Middle Missouri variant Mill Creek sites in northwestern Iowa and their comparison to Western Initial variant sites in South Dakota indicate that the Iowa sites date to A.D. 975-1250 (uncalibrated). This represents a shortening of the time span traditionally attributed to the Eastern Initial variant by as much as 250 years and results in a developmental sequence which is coterminous with the Lohmann, Stirling, and Moorehead phases of the American Bottom. The new chronological framework implies that Mill Creek trade with Middle Mississippian centers was of a shorter duration and greater intensity than previously thought. Cultural implications of this trade "burst" are discussed.

Neal Lopinot (Southwest Missouri State U) — see **Timothy Pauketat**

David Lowe (U of Wisconsin-Madison) HOUSES OF STONE: ROCKSHELTERS OF SOUTHWESTERN WISCONSIN [Session 9]

Over 150 rockshelters utilized by prehistoric populations have been identified as the result of a survey of southwestern Wisconsin. Site size, use, distribution, and geology are discussed. Future survey plans and expected results are presented.

Rochelle Lurie (MARS) ROBINSON RESERVE REVISITED [Session 11]

The Robinson Reserve Site provided the focus for Melvin Fowler's Masters Thesis (1948). Thirty-eight years later, the site was revisited by field schools sponsored by Northwestern University. Goals were to address questions about site structure, and subsistence and maintenance activities from a processual perspective using techniques that were unavailable or relatively unused in the 1940s. The entire site was systematically surveyed, and excavations provided large assemblages of ceramics, lithics, animal and plant remains from undisturbed midden and features. Data derived from these materials confirm some of Fowler's interpretations, but present a much more complex picture of this Langford Tradition Upper Mississippian site.

Jerald E. Maters (Rutgers University) THE APPLICATION OF FUZZY CLUSTER ANALYSIS TO THE CLASSIFICATION OF THE LITHICS OF THE MODOC ROCK SHELTER [Session 5]

This paper addresses the classification of lithic tools from the Modoc Rock Shelter (Illinois). This shelter was occupied over several thousand years. Experts have labelled 20 different tool types from the site. In this paper a dimensional analysis of a sub-set of the Modoc lithics is compared with the expert classification. This sub-set consists of 126 lithic tools for which complete data in 8 dimensions were available. Fuzzy set theory is a form of mathematical modelling which considers set membership to be a matter of degree, rather than present-absence. Lithics, like many of the objects of archaeological research, are not precisely manufactured. This suggests that lithic analysis might be appropriately handled within a fuzzy model. This paper demonstrates the use of Fuzzy C-means cluster methodology in the development of dimensional classifications.

Robert Mainfort Jr (Memphis State University) THE GRAVE LAKE SITE AND LATE MISSISSIPPIAN CHRONOLOGY IN THE CENTRAL MISSISSIPPI VALLEY [Session 11]

The Graves Lake site is a Late Mississippian village located in Lauderdale County, Tennessee. Investigations at the site included a controlled surface collection and limited test excavations. Seven radiocarbon determinations have been obtained. Since there are very few dates for this time period in the Central Mississippi Valley, the Graves Lake dates and the associated artifact assemblages have important implications for late period chronology throughout the region.

James A. Marshall (Schaumburg IL) WOODHEDGE AND THE CAHOKIA YARD; A SKEPTICAL VIEW [Session 3]

I object to claims of astronomical alignments at Woodhenge because such are based on only 8 or 10 of more than 200 posts with no explanation of the function of the other posts; claimants have offered no pattern of facts of similar alignments on other sites; claimants have demonstrated no understanding of a design process for the layout of such works; finally, my surveys and maps of more than 215 sites of prehistoric construction fail to confirm use of such azimuths elsewhere or use of a Cahokia Yard.

Mark L. Madsen (Roosevelt University/Chicago Archeological Soc) THE TERRY SITE AND ITS RELATIONSHIP TO THE POTAWATOMI VILLAGE OF SEMINICON, OR PAW PAW GROVE [Session 4]

The Terry Site is located on the former Potawatomi village of Paw Paw Grove, or "As-sim-in-eh-Kon." Pierre Leclerc had been granted this section of land at the Treaty of Prairie du Chien in 1829. Madeline Ogee had been granted one section of the land to the west, and Chief Shabbona had been granted two sections of land to the east. Paw paw fruit trees, which are indigenous to southern swamps, still grow at the site. Three hundred forty-seven diagnostic knives and points collected randomly by the Terry family over the past sixty years, show that the site had been continually occupied for at least 12,000 years. The large data base provides an intriguing look into population trends at this upland site.

Carol I. Mason (U of Wisconsin-Fox Valley) PAUL RADIN'S ARCHAEOLOGY [Session 11]

Paul Radin's contributions to the difficult Oneota/Winnebago problem in the Western Great Lakes have been profound. Many of his reconstructions of social structure and ideology are routinely accepted as applicable to protohistoric and even prehistoric sequences. Archaeologists need to know the origins of some of his reconstructions and how reliable they are for archaeological work.

Carol L. Mason (UW-Oshkosh/Milwaukee) 1993 EXCAVATIONS AT THE GRIGNON MANSION (47-OU-115), KAUKAUNA, WISCONSIN [Session 12]

The Charles Grignon Mansion is located on the Fox River at Kaukauna, Wisconsin. Built in 1836, during the American Fur Trade Era, it is on the National Register of Historic Places. Several depressions in the yard were investigated by the 1993 Fur Trade Survey Project which was sponsored by a Survey and Planning Grant from the State Historical Society of Wisconsin and matching funds from East Central Wisconsin Regional Planning Commission and UW-Oshkosh. Excavation revealed the root cellar and an adjacent trash deposit. Historic materials were recovered which will support the interpretation and authentic-refurnishing of the Mansion.

Richard P. Mason (U of Wisconsin-Oshkosh) RECENT EXCAVATIONS AT THE DOTY ISLAND VILLAGE SITE (47-WN-30), NEENAH, WISCONSIN [Session 4]

The Doty Island Village Site, long thought to be the home of the Winnebago Indians during the Historic Period, has recently been tested and found to contain historic trade goods and aboriginal artifacts. A time frame of 1650 to 1780 is suggested based on bead chronology. Ceramics, crucial for identifying tribal affiliations, indicate that several groups lived in Doty Island during the historic milieu of the 17th and 18th centuries.

Al Meyer (Cahokia Mounds Museum Society) — see **Zennie Herring**

George R. Milner (Pennsylvania State University) CONTROVERSIES CONCERNING CAHOKIA'S COMMUNITIES [Session 1]

For two decades, Melvin Fowler's pioneering work in the American Bottom has served as the settlement model of choice for Cahokia archaeologists. His model organized settlement data, blazed the trail for subsequent research, and set the stage for current controversies over the scale and stability of late prehistoric sociopolitical systems. At this juncture, these widely divergent interpretations and the results of recent investigations make it necessary for archaeologists to reevaluate current understandings of the internal structure, spatial distribution, function, and longevity of communities, as well as the social and ecological attractants to particular parts of the valley.

George R. Milner (Pennsylvania State University) and **Stssel Schroeder** (Pennsylvania State University) THE BOIS BRULE BOTTOMS: PLUGGING GAPS IN SURVEY COVERAGES [Session 9]

Prior to 1993, no prehistoric sites were known in the Bois Brule Bottom of Perry County, Missouri, despite many reported sites in adjacent segments of the Mississippi River floodplain. Exploratory Cahokia Area Survey Project work in May located Late Woodland and Mississippian sites, identified landforms where sites are likely to occur, and yielded culturally diagnostic materials that refine current knowledge about a boundary between stylistically dissimilar late prehistoric ceramic zones. Early historic maps show where resource-rich swamps were once located and places where the past 200 years of river movement may have destroyed sites.

James E. Myster (Minnesota Historical Society) and **Brian W. Hoffman** (UW-Madison) DATA RECOVERY INVESTIGATION OF THE ST. CROIX RIVER ACCESS SITE (21WA49), WASHINGTON COUNTY, MINNESOTA: A MULTICOMPONENT WOODLAND AND ARCHAIC HABITATION SITE [Session 5]

Excavations at the St. Croix River Access Site (21WA49), Washington County, Minnesota were conducted in 1991 by the Archaeology Department of the Minnesota Historical Society. This project was funded by the Minnesota Department of Transportation and Federal Highway Administration. Investigations in 1983, 1984, and 1990 revealed a multicomponent Archaic and Woodland Tradition habitation site. Excavations in 1991 concentrated on a portion of two deeply buried Archaic Tradition occupation zones. Results documented a heavy reliance upon local resources, especially Prairie du Chein Chert. Analytical comparisons of lithic debitage between components at the site indicated a shift to a greater emphasis on bipolar technology in the Woodland.

Susan Myster (Hamline University) — see **Billie Keaveny**

Pbllip Neustus (Indiana Univ of Penn) — see *Lynne P. Sullivan*

Sarah Neustus (Indiana Univ of Penn) — see *Lynne P. Sullivan*

Margot Neverett (University of Iowa), **William Green** (Office of the State Archaeologist), and **Mary K. Whelan** (University of Iowa) **FURTHER INVESTIGATIONS OF THE WEAVER OCCUPATION AT THE GAST FARM SITE (13LA12), SOUTHEASTERN IOWA [Session 10]**

The 1993 excavations at the Gast Farm Site (13LA12) focused on determining the intrasite organization of the early Late Woodland Weaver village. Two areas with contrasting surface densities of materials were sampled. Over 100 cultural features were identified with intensive occupation indicated by intersecting and superimposed pit features, postmolds, and hearths. Preliminary analysis of the artifacts suggests distinct activity areas where food processing and stone and bone tool manufacture were conducted. Continued work with the Gast Farm materials will focus on explicating the social organization of the Weaver village and contrasting it with other Woodland period villages at this site.

David J. Nolan (WIU Archaeological Research Lab) and **Laurence A. Conrad** (Western Illinois University) **ONEOTA OCCUPATIONS ALONG THE MISSISSIPPI VALLEY IN WEST CENTRAL ILLINOIS [Session 11]**

Survey in the Lima Lake locality of the Mississippi Valley by WIUARL has identified a significant Oneota presence. Oneota settlement between Quincy and Warsaw appears strongly nucleated with large village aggregates on the Mississippi bluffcrest and fans. Smaller Oneota sites have also been found at the valley margin and in strictly lowland environments. Oneota sites have not been identified in the adjacent dissected uplands, despite substantial survey. Several sites have late (ca. 1450 - 1600 AD) components yielding Catlinite disk pipes and boldly trailed ceramics. Unsystematic survey has also documented Oneota sites as far north in western Illinois as the Muscatine area.

Barbara O'Connell (Hamline University) — see *Billie Keaveny*

Jodie A. O'Gorman (SHSW Museum Archaeology Program) and **Holly Halverson** (MVAC) **PATTERNS OF ONEOTA MORTUARY BEHAVIOR AT THE LA CROSSE LOCALITY, WISCONSIN [Session 6]**

While patterns of Oneota subsistence, settlement, and culture change have been examined and cultural chronology refined for the La Crosse locality, patterns of mortuary behavior remain relatively unexplored. Recent excavations at the Tremaine complex and Gunderson sites produced significant new data on Oneota mortuary practices. This paper examines these and other mortuary data from the locality. Variation in spatial organization, interment types, and grave goods which may be indicative of social divisions within the populations are discussed. Spatial organization of burials observed at Tremaine and Gunderson has possible implications for Oneota mortuary studies in other geographic areas.

David F. Overstreet (Great Lakes Archaeological Research Center) — see *Keith A. Sverdrup*

Timothy Pauketat (University of Oklahoma), **Gayle Fritz** (Washington University), **Lucretia Kelly** (Washington University), and **Neal Lopinot** (Southwest Missouri State U) **EARLY CAHOKIA: A NEW RESEARCH PROJECT IN THE AMERICAN BOTTOM [Session 3]**

Pedestrian survey, mound excavation, and preliminary analysis of a large submound borrow pit at Cahokia comprise the initial season of a coordinated multi-year research project to investigate early Cahokian political centralization and economic change. Initial results include the documentation of a Lohmann phase platform mound's construction details, preliminary quantification of possible elite food remains from Cahokia, and enumeration of previously unrecorded habitation sites and minor centers-with-mounds around Horseshoe Lake. Future years will witness continued sampling of likely high-status domestic zones and refuse from Cahokia and secondary centers in order to track the abrupt transformation of early Cahokia.

Michael Perry (University of Iowa) **13IW216: AN APPARENT KEYES PHASE COMPONENT IN THE AMANA LOCALITY, EASTERN IOWA [Session 10]**

Site 13IW216 was located during a survey of proposed improvements to a segment of U.S. 151 north of Amana, Iowa. Phase II testing

was recommended based on the recovery of a Late Woodland projectile point and lithic debitage from Phase I shovel tests at the site. The test excavations yielded additional Late Woodland chipped stone tools, a Madison ware rim sherd, debitage, and fire cracked rock. The distribution of artifacts in relation to soil, geomorphological, and environmental data indicated a single component winter camp. The diagnostic artifacts and the settlement pattern data are characteristic of the Effigy Mounds tradition, suggesting use by Keyes phase related populations.

Gordon R. Peters (USDA Forest Service) and **Kathleen Scbamel** (CEHP, Inc) **PASSPORT IN TIME: VOLUNTEERS IN HERITAGE MANAGEMENT** [Session 7]

Most archaeological work in the USDA Forest Service has been confined to compliance activities required by Sections 106 and 110 of the National Historic Preservation Act, with minimal public involvement. In 1989, the Forest Service developed Passport in Time as part of its evolving "Windows on the Past" Initiative. The intent was to involve the recreating public with heritage research/conservation activities as an option for complying with the 1988 Archaeological Resource Protection Act "public education" amendment. This paper will discuss the Passport in Time program, what it has accomplished, and public reaction to the program.

Cynthia L. Peterson (Office of the State Archaeologist, Iowa), **Leab D. Rogers** (Office of the State Archaeologist, Iowa), and **Fred A. Finney** (Office of the State Archaeologist, Iowa) **INVESTIGATION OF THE TURKEY RIVER SUBAGENCY SITE (13WH111), WINNESHIEK COUNTY, IOWA: A GOVERNMENT ADMINISTRATIVE SUBAGENCY TO THE WINNEBAGO INDIANS, 1840-1848** [Session 4]

Historical and archaeological research was conducted at the Turkey River Subagency site (13WH111), one of the U.S. Government's administrative centers in the Neutral Ground from 1840-1848. The subagency and nearby Fort Atkinson played crucial roles in various aspects of Indian removal immediately prior to authorized Euro-American settlement in the region. The Subagency served a wide range of duties related to the Winnebago occupation of the area. At least 14 structures and five agricultural fields were associated with the site. These features were relocated using oral history, archival, and archaeological investigation. Suspected burial grounds, areas surrounding the agricultural fields, and associated Euro-American sites were also examined. Study of the site provides significant information on the forced settlement of the Winnebagos west of the Mississippi River in the Neutral Ground.

He Ping (Winnebago Nation GIS Dept) — see **Steven Hackenberger**

Tom Pleger (U of Wisconsin-Madison) **A FUNCTIONAL AND TEMPORAL ANALYSIS OF COPPER IMPLEMENTS FROM THE CHAUTAUQUA GROUNDS SITE (47-MT-71), A MULTI-COMPONENT SITE NEAR THE MOUTH OF THE MENOMINEE RIVER** [Session 2]

This paper examines the functional aspects of copper implement technology from a lake shore site in Northeast Wisconsin (Chautauqua Grounds Site 47-Mt-71) and the importance of fishing. The paper also presents a new accelerator (AMS) date on a shaft fragment from a surface collected copper harpoon.

Tom Pleger (U of Wisconsin-Madison) **GREEN ISLAND LIGHT-STATION (47-MT-128), A SYNTHESIS OF RELATED HISTORICAL AND ARCHAEOLOGICAL RESEARCH AT A LIGHTHOUSE LOCATED ON GREEN ISLAND IN THE BAY OF GREEN BAY** [Session 12]

Green Island Light-Station was first erected in 1863. Since its initial construction it has undergone many technological changes that eventually led to its abandonment in 1933. This paper presents the results of field survey and historic research conducted during 1992-1993. From these data a detailed understanding of the lifestyles of various light-house keepers was made possible. The paper discusses the potential for future research at Great Lakes Light-Station sites.

Loretta Rhoads (Illinois Arts Council) **TRADITIONAL ARTS AND PUBLIC FUNDING AGENCIES** [Session 7]

Stereotypes of ethnic groups are rampant in our society, affecting interaction with the broader community as well as legislation and social services targeted to specific groups. In developing and funding traditional arts programs, agencies must seek out valid representatives of the ethnic groups being served. The support of bogus arts or artists validates and advocates not only stereotypes, but frauds, and effectively blocks the true voice of traditional people.

Patricia Richards (GLARC) EXCAVATIONS AT THE MILWAUKEE COUNTY INSTITUTION GROUNDS ALMSHOUSE CEMETERY [Session 12]

In 1991 and 1992, Great Lakes Archaeological Research Center, Inc. conducted recovery operations at the Almshouse burial ground, Milwaukee County Poorhouse, part of the Milwaukee County Institutions Grounds, Wauwatosa, Wisconsin. A total of 1649 burials were uncovered, documented, and removed. Adult burials comprised 987 of the excavated burials; 586 were subadult and 76 of the burials were indeterminate. Through utilization of archaeological data and historical research, the land use history of the cemetery has been reconstructed. Further, burial ledger information along with death certificates and interpretation of cemetery patterning allowed identification of specific individuals in one portion of the cemetery.

Thomas J. Riley (Uof Illinois Urbana-Champaign) — see **Gregory Walz**

Zachary C. Robinson (University of Toledo) — see **David Stothers**

Leab D. Rogers (Office of the State Archaeologist, Iowa) — see **Cymblla L. Peterson**

Charles Robrbaugh (Archaeological Consultants) 1993 EXCAVATIONS AT THE GRAND VILLAGE OF THE ILLINOIS STATE HISTORIC SITE [Session 12]

This season at the Grand Village of the Illinois State Historic Site (aka Zimmerman) saw excavations at the Sulphur Springs Hotel and further non-random testing of the earlier contexts. The hotel is a four-story tavern, probably built in 1852 and converted to a residence in 1862. State plans to reinforce the foundation led to the testing. Excavations revealed the builder's trench, an early cistern, and a possible cellar. Non-random testing concentrated on the southern part of the 60ac field east of the house. Forty-four one meter squares clearly indicate the size and depth of the site in this area.

Martha Rolington (Arkansas Archaeological Society) SYMBOLIC AND CALENDRIC ASPECTS OF COMMUNITY DESIGN IN EASTERN NORTH AMERICA [Session 1]

The planning and organization of Cahokia was one of Mike Fowler's research interests in the early 1960s. This interest resulted in publication of an atlas of the site and in excavation of Mound 72. Archaeoastronomy gained acceptance in the 1960s and archaeologists in eastern North America started looking at site plans for astronomical points and alignments. Evidence for naked eye astronomy is found in sites as early as the Late Archaic and continue into the Historic period. Interest has shifted to the social and symbolic implications of these astronomical elements, transcending practical calendrical uses for subsistence activities.

Bret Ruby (Glenn A. Black Laboratory), **Christine M. Shriner** (Indiana University), and **Clifford P. Ambers** (Indiana University) HOPEWELLIAN CERAMIC PRODUCTION AND EXCHANGE AT THE MANN SITE, SOUTHWESTERN INDIANA [Session 10]

The Mann site (12 Po 2) is a large late Middle Woodland (AD 100-500) habitation site and corporate-ceremonial center located near the confluence of the Wabash and Ohio Rivers. The high frequency of complicated stamped and single stamped ceramics contributes to the unique nature of the site. These ceramics are common in the Southeast, but exceedingly rare in the Ohio Valley. Optical microscopy and x-ray diffraction of Mann site sherds and local clays documents the local production of the vast majority of these ceramics. The composition of a small subgroup of single stamped ceramics points to an origin in the Appalachian Piedmont.

David Ruggles (Michigan State University) — See **Charles E. Cleland**

Gail M. Saler (U of Wisconsin-Milwaukee) MOUND VERIFICATION THROUGH SOIL PROBE STUDIES [Session 2]

Two unreported effigy mound groups in Washington County, Wisconsin, documented by Southeastern Wisconsin Regional Archaeology Program, suggested that mound verification is possible through the use of a soil probe study. Data was collected on all possible mound-like features and undisturbed off mound areas at the two sites. The data was then compared for differences while taking into account the ongoing pedogenic processes. Atypical developments were further studied, results of which show a sharp division between mound construction soil sequences and non-mound historic disturbances.

Philip Salkin (Archaeological Consulting and Services) **THE PIG'S FORT AND THE FOX VILLAGE: NEW INSIGHTS INTO THE ARCHAEOLOGY OF THE PRAIRIE DU CHIEN AREA** [Session 4]

The Pig's Eye Fort was a mid-18th century French outpost reported to have been located at Prairie du Chien. Although discussed in local histories and shown on several 19th century maps, the actual location of the fort and nearby Fox village of the same time, have never been identified. A 1992 survey in the area indicated the likely presence of a mid-18th century Native American site. This discovery led to further archival and field research. The work confirmed the location of the historic Native American occupation and provided information which appears to identify which map actually locates the fort.

Robert J. Salzer (Beloit College) **THE EMERGENCE OF MISSISSIPPIAN ART** [Session 11]

The emergence of the spectacular and complex Mississippian development in Eastern North America in the late tenth century was accompanied by the appearance of equally spectacular and complex art work in a variety of media. Increasing attention is being devoted to description and analysis of these prehistoric iconography with the ultimate hope of being able to extract meaningful insights into the ideological systems that this art reflects. This paper: 1) reviews recent data from rock art sites in the midwest and; 2) explores preliminary assessments on the origins of Mississippian art.

Sharron Santure (Illinois State Museum) **NORRIS FARMS 36 CEMETERY** [Session 6]

In 1984 Dickson Mounds Museum archaeologists, working in conjunction with the Illinois Department of Transportation, removed an entire Bold Counselor Oneota cemetery consisting of 264 individuals. Located in Fulton County, the site is the earliest of the five known central Illinois River valley Oneota occupations. The burials, which represent all age groups, shed light on prehistoric disease, warfare, and specialized duties within a late 13th century community. Spatial distribution of age and gender are examined. Disease and trauma patterns reflect a group of people under great social and nutritional stress, while grave good associations exhibit signs of cultural integration of this intrusive group within the resident Mississippian population.

Robert F. Sasso (U of Wisconsin-Parkside) and **William G. Gartner** (UW-Madison) **GARDEN BEDS, CORN HILLS, AND CORNFIELDS: CURRENT INVESTIGATIONS INTO AGRICULTURAL SITES IN WISCONSIN** [Session 9]

Current efforts expand the scope of research regarding the nature of prehistoric and early historic agricultural sites in Wisconsin. While several hundred sites have been reported here over the years, very few have ever been systematically mapped or excavated. The authors describe recent and ongoing investigations into garden bed, corn hill, and reported field sites located in various parts of the state. The status of current research is summarized, and plans for future archaeological researches are presented that will provide us an unprecedented body of comparative data for assessing the variation in aboriginal agricultural practices that has existed within the Upper Midwest.

Kathleen Schamel (CEHP, Inc) — see **Gordon R. Peters**

Shirley Schermer (Office of the State Archaeologist) **NORTHEAST IOWA ONEOTA MORTUARY PATTERNS** [Session 6]

Recent archival research, conducted by the Iowa OSA Burials Program in compliance with the Native American Graves Protection and Repatriation Act, has summarized considerable burial data from several Orr phase Oneota sites located along the Upper Iowa River in Allamakee County, northeast Iowa. These sites were excavated in the 1920s and 1930s by Charles R. Keyes and Ellison Orr and in the 1950s and 1960s by others. Since few burials have been excavated in recent years because of Iowa's burial protection law, reexamination of these "old" data sets is extremely valuable in shedding "new" light on Oneota mortuary practices.

James P. Scherz (U of Wisconsin-Madison), Jan Beaver (Winnebago Nation), and Richard Brown (Winnebago Nation) **EAGLE EFFIGY MOUNDS NEAR MUSCODA, WISCONSIN** [Session 8]

The Winnebago Nation, working with the Surveying Group, Department of Civil and Environmental Engineering of Madison, are analyzing modern surveys, historical surveys, and data from aerial mapping of a very impressive mound group, which historically has been called "The Eagles" and today is referred to by some as the "Ghost Eagle Site." This area, once of great importance to the Native

Americans, has now been purchased by the Winnebago Nation. Their plans include locating on the ground the mounds shown in the maps of T.H. Lewis and on the photos, creating a park with appropriate areas of restored prairies and a buffalo ranch, and possibly incorporating the "Ghost Eagle Site" into a cultural heritage park open to all visitors.

Andrew M. Schneider (University of Toledo) — see *David Stothers*

Margaret J. Schoeninger (UW-Madison) — see *Mark Schurr*

Sissel Schroeder (Penn State University) WATER, WATER EVERYWHERE: PREHISTORIC OCCUPATION IN THE SOUTHERN AMERICAN BOTTOM [Session 9]

The first field component of the Cahokia Area Survey Project was conducted during eight months in 1992-1993 along the Mississippi River in Monroe County, Illinois. The floodplain survey resulted in the identification of sites ranging from Archaic to early Historic times, an increase in the number of known sites, the discovery of local and exotic artifacts that expand knowledge of prehistoric exchange systems, and the documentation of intrasite variability in debris scatters. Within the region's heterogeneous physical landscape, site locations are restricted to particular landforms with a shift through time to higher elevations.

Sissel Schroeder (Penn State University) — see *George Milner*

Mark Schurr (Univ of Notre Dame) and **Margaret J. Schoeninger** (UW-Madison) ISOTOPIC EVIDENCE FOR VARIATIONS IN FORT ANCIENT SUBSISTENCE SYSTEMS [Session 11]

Fort Ancient cultures have been characterized as "village-dwelling agriculturists inhabiting the Ohio Valley." This description is accurate, but it ignores regional and temporal variation in Fort Ancient subsistence that are clearly indicated by variations in human stable carbon isotope ratios. Previously reported isotope ratios, along with new data from the Baum, Gartner, Sun Watch, and Fuert sites, show that Fort Ancient populations consumed less maize than Middle Mississippian ones in comparable environmental settings. These data also suggest that social complexity in the Ohio Valley was ultimately constrained by environmental limits on agricultural intensification.

Michael Shott (U of Northern Iowa) ADOPTION OF THE BOW-AND-ARROW AND TIME-DEPENDENT VARIATION IN WOODLAND "PROJECTILE POINTS" FROM THE AMERICAN BOTTOM [Session 10]

This paper addresses two questions on the Woodland prehistory of the American Bottom: 1) the timing and nature of the transition from dart to arrow; and 2) the nature and explanation of time-dependent variation in the size and form of dart and arrow "points." It briefly considers as well a related issue explored in some depth by Braun, the chronometric potential of continuous variation in artifacts. To address these questions, the paper also examines the kinds and causes of variation in material culture. Data are from chiefly the Late Woodland occupations investigated by the FAI-270 project.

Christine M. Shriner (Indiana University) — see *Bret Ruby*

Kent Skaar (Minnesota Historical Society) and **Kent Bakken** (Minnesota Historical Society) THE SANDON SITE VESSEL [Session 10]

The Sandon site is located in south central Minnesota, on the Le Sueur River flood plain. Limited testing of a middle Woodland component, discovered in a paleosol 180 cm below surface, recovered approximately 60% of a reconstructible ceramic vessel. This grit tempered vessel is subconoidal in form, with a straight rim, flat lip, and vessel walls 9 to 14 mm thick. Decoration consists of cordwrapped stick impressions, vertical combing, and annular semilunate impressions. Carbonaceous residue from the vessel interior was dated to 2110 ± 50 BP. The residue also contains phytoliths; a detailed phytolith analysis in progress is expected to yield information on Middle Woodland subsistence patterns.

Beverly A. Smith (Michigan State University) See *Dean L. Anderson*

Bruce D. Smith (Smithsonian Institution) PRESCIENCE AND PREHISTORY: MELVIN FOWLER'S REMARKABLE

INSIGHTS REGARDING THE ORIGINS OF PLANT DOMESTICATION IN EASTERN NORTH AMERICA [Session 1]

At the 1957 American Anthropological Association annual meeting, Melvin L. Fowler presented a paper entitled "The Origin of Plant Cultivation in the Central Mississippi Valley: A Hypothesis." Not published until 1971, this paper presented a detailed set of predictions regarding the behavioral and environmental context and timing of the initial domestication of indigenous seed plants in eastern North America, as well as offering a general profile of the plants involved. Thirty-seven years later, we can compare Fowler's predictions with what we now know regarding the origin of plant cultivation in the region. I suggest that Fowler's remarkable prescience may rank with James B. Griffin's development of a generally accurate chronological framework for eastern North America before the application of radiocarbon dating.

Jeanette E. Stephens (Center for Archaeological Investigations) — see **Michael L. Hargrave**

Cynthia Stiles (Nicolet National Forest) **AZTALAN STATE PARK: AN ANCIENT SITE WITH A NEW LOOK [Session 7]**

Aztalan is one of the most important sites in Wisconsin, representing a unique expression of Middle Mississippian culture. Despite its importance, the park received token support from the state's coffers. In 1989, a legislative task force recommended the development of a plan for the park. Since the summer of 1990, work has emphasized sign and display update, a self-guided tour, improved landscaping and maintenance, and long-range planning. This work was initiated by the Wisconsin Department of Natural Resources in cooperation with several state agencies, members of the legislature, the Wisconsin Archaeological Survey, and the local historical society.

David Stothers (University of Toledo) **THE "MICHIGAN OWASCO" AND THE IROQUOIS CO-TRADITION: LATE WOODLAND CONFLICT, CONQUEST, AND CULTURAL RE-ALIGNMENT IN THE WESTERN LOWER GREAT LAKES [Session 10]**

It is suggested that early Late Woodland (ca. AD 500 - AD 1300) Western Basin Tradition populations which inhabited the Saginaw Valley and the greater western Lake Erie region were ethnically and linguistically Iroquoian, and constituted a separate cultural-historical branch of the Ontario Iroquois Tradition. It is suggested that Upper Mississippian Wolf Phase populations, which radiated from north-central Ohio in late prehistory, dispersed these Western Basin Tradition populations and established founding populations which later gave rise to the Central Algonquian speaking "Fire Nation" Confederacy which included the Sauk, Fox, Totontaratonhronon, and Ontarraronon.

David Stothers (University of Toledo), **Timothy J. Abel** (University of Toledo), and **Zachary C. Robinson** (University of Toledo) **THE CROWN SITE: NEW PERSPECTIVES ON THE ANNUAL SETTLEMENT-SUBSISTENCE SYSTEM OF THE SANDUSKY TRADITION WOLF PHASE IN NORTHCENTRAL OHIO [Session 11]**

Excavation at the Crown site, located on a terrace overlooking the Sandusky River in northcentral Ohio, has disclosed evidence of three horizontally separate but slightly overlapping components. These consist of an early Wolf phase (AD 1250 - AD 1450) warm weather agricultural hamlet; an 18th or early 19th century Wyandot cemetery; and an early 19th century Euro-American cabin site and related cemetery. Only the prehistoric Wolf phase component is considered in this presentation. An annual settlement-subsistence model, characterized by warm weather agricultural hamlets and cold season hunting camps is for the first time documented for Sandusky Tradition Wolf phase populations, the prehistoric ancestors of the protohistoric Totontaratonhronon, one of the constituent tribal members of the Assiataaronon Confederacy.

David Stothers (University of Toledo), **Timothy J. Abel** (University of Toledo), and **Andrew M. Schneider** (University of Toledo) **BEAR FORT: A STRATIFIED PREHISTORIC-PROTOHISTORIC SANDUSKY TRADITION OCCUPATION SITE [Session 10]**

The Bear Fort Site (33-SA-8) is located in northcentral Ohio on a bluff overlooking the Sandusky River. The site represents a prehistoric through protohistoric multi-component Sandusky Tradition village site, which firmly supports the established radiocarbon dated ceramic sequence and contains four of five phases of the Late Woodland time period in ascending stratigraphic sequence. The cultural assemblage documents occupations of the Eiden, Wolf, Fort Meigs, and Indian Hills phases of the Sandusky Tradition. The archaeologically known Sandusky Tradition is recognized historically as the central Algonquian Totontaratonhronon

tribal group, a constituent member of the "Fire Nation"/Assatacronon Confederacy.

Charles B. Stout (World Heritage Museum) **A DIRECTIONAL VARIANCE METHOD FOR IDENTIFYING AND DESCRIBING PATTERNS IN SURFACE COLLECTION NUMERICAL DATA** [Session 2]

This paper describes an exploratory-descriptive method for identifying and evaluating intra-site spatial patterning of surface material culture. Like Whallon's (1973) "dimensional analysis of variance," this method uses a grid of contiguous quadrants in analyzing patterning, as well as a series of variance estimate calculations to avoid mere "inspection and impressionistic" interpretations, but unlike that approach, this directional variance method iteratively calculates the variance between quadrant pairs at all distances from each other along individual grid axes to produce fine-grained, unidirectional pattern analyses. This method's use is illustrated by application to controlled surface collection data from two different sized late prehistoric sites in the Midsouth.

Bongie W. Styles (Illinois State Museum) and **Steven R. Abler** (University of Illinois) **CHANGING INTERPRETATIONS OF MODOC ROCK SHELTER** [Session 1]

It has been more than three decades since Fowler published his landmark study of the archaeological record at Modoc Rock Shelter. It constituted one of the first explicitly ecological and regional interpretations of Archaic adaptation. His approach diverged from classificatory studies and combined analyses of features, artifacts, and faunal remains to yield integrated interpretations. In the intervening years, new methods and analyses have contributed more and new types of data. More comprehensive understanding of past environments and theories of hunter-gatherer organization have guided interpretations of subsistence remains, technology, and settlement, resulting in a refinement of models of Archaic adaptation.

Lynne P. Sullivan (New York State Museum), **Sarah Neustus** (Indiana Univ of Penn), and **Phillip Neustus** (Indiana Univ of Penn) **RECONSIDERING THE EARTHWORKS OF THE LOWER GREAT LAKES** [Session 9]

The assumption that late prehistoric earthworks in the lower Great Lakes region represent village fortifications is common in archaeological literature. Our reexamination of older data and newly collected information from the Ripley site, an earth ring site on the bluffs above Lake Erie, suggests that this site is not a simple fortified village and cemetery. Our analyses to date imply that the occupational history of this site is more complex and possibly involves mortuary ritual. This tentative conclusion leads us to call for reevaluation of the northern earthworks to assess their functions and place in regional settlement models.

Keith A. Sverdrup (U of Wisconsin-Milwaukee) and **David F. Overstreet** (GLARC) **APPLICATION OF ELECTRICAL RESISTIVITY SURVEYING TO THE LOCATION OF GRAVE SITES** [Session 12]

In 1991 a "pauper" cemetery was disturbed during the initial stages of construction on the grounds of the Milwaukee County Medical Complex. Subsequent to this discovery the Great Lakes Archaeological Research Center, Inc. conducted archaeological and remote sensing investigations at the site. Preliminary results indicate that closely-spaced electrical resistivity measurements taken along several lines perpendicular to the graves can successfully locate individual burials at depths of a few feet beneath the surface.

Neal L. Trubowitz (Missouri Historical Society) **A LITTLE FROM THERE, A LOT FROM HERE: MIDWESTERN ARCHAEOLOGICAL MATERIALS AT THE MISSOURI HISTORICAL SOCIETY** [Session 9]

From 1866 until 1921, the Missouri Historical Society actively sought archaeological collections, concentrating on Missouri and Illinois, but also obtaining material from around the Midwest, including Indiana, Iowa, Michigan, Minnesota, Ohio, Wisconsin, Kentucky, and Tennessee. The collections were diminished and largely languished from 1930 to 1990. Recently, the Society invested in its archaeological past, rehousing some 9,000 objects at its new Library and Collections Center. Research highlighted pioneer archaeology at Cahokia, the Onkotz site, and elsewhere. The investigations restored acquisition information, updated the computerized inventory, and identified the potential for additional research and renewed exhibition.

Gregory Walz (U of Illinois Urbana-Champaign) and **Thomas J. Riley** (U of Illinois Urbana-Champaign) **PRELIMINARY REPORT ON THE 1993 UNIVERSITY OF ILLINOIS ARCHAEOLOGICAL FIELD SCHOOL: INVESTIGATIONS IN THE UPPER ILLINOIS RIVER VALLEY, LASALLE COUNTY, ILLINOIS** [Session 9]

During the 1993 field season, the UIUC Archaeological Field School initiated a research program in the Upper Illinois River Valley which included a pedestrian survey of over 100 hectares of river terrace, and the excavation of a remnant portion of the Middle Woodland Ithica Mound Group (11-1s-1). The survey resulted in the extension of the boundaries of the Zimmerman site (11-1s-13),

and the recording of three lithic scatters north of Zimmerman. Investigations at 11-Ls-1 produced significant evidence for the use of this site as a lithic reduction station, yet unfortunately yielded little information regarding Middle Woodland activities associated with burial mounds.

Robert E. Warren (Illinois State Museum) FRESHWATER MUSSELS FROM CAVES AND ROCKSHELTERS AT FORT LEONARD WOOD, PULASKI COUNTY, MISSOURI [Session 9]

Test excavations have recovered freshwater mussel shell from seven caves and rockshelters near the Big Piney River and Roubidoux Creek at Fort Leonard Wood, Missouri. Mussels at these sites were used primarily as a food resource. The three most abundant taxa include *Elliptio dilatata*, *Venustaconcha ellipsiformis*, and *Lampsilis reeviana*. The mussels were collected from a small river or a large creek with shallow water, a swift current, and a gravel or gravel-sand substrate. The Big Piney assemblages are very similar to those from Roubidoux Creek, although they are more diverse and contain a greater component of large-river species.

Mary K. Wbelan (University of Iowa) — see *Margot Neverett*

John K. White (Ancient Lifeways Institute) THE GOLDEN EAGLE EARTHWORKS, CALHOUN COUNTY, ILLINOIS [Session 10]

Located at the juncture of the Mississippi and Illinois Rivers, the Middle Woodland Golden Eagle Earthworks have never been adequately surveyed. Utilizing a combination of aerial and on-ground techniques, the underlying constructional scheme could be mapped and studied. Geometric and alignment relationships between smaller mounds within the earthworks, and also with outliers, indicate mathematical as well as solar concerns. The earthworks will be compared with other floodplain mound groups on the area.

Raymond O. White Jr (Miami Nation of Indiana) THE MIAMI OF INDIANA: WORKING WITH CULTURE [Session 7]

Chief White advocates that Indian nations work with cultural institutions in order to learn more about their past. He is instrumental in writing Indiana's Burial Desecration Law, passed in 1991 and considered to be one of the best in the country. He is also actively working with the Department of Natural Resources, the state Department of Historic Preservation, and various universities and colleges within Indiana to assist with archaeological and preservation projects. In this paper, he will discuss working with cultural institutions and his approach on blending traditional Native American beliefs with academic study.

Joyce A. Williams (Southern Illinois University) and **Fran McIntosh** (Southern Illinois University) HISTORIC COMPONENT OVERVIEW AT THE SCOTT JOINT-USE PROJECT [Session 4]

A reconnaissance survey identified 140 sites and isolated finds within approximately 3700 acre area that will be impacted by the proposed expansion of Scott Air Force Base, St. Clair County, Illinois. Historic components account for 20% of these sites. Phase II testing and Phase III mitigation is ongoing. We will present an overview of this historic occupation, which encompassed most of the 19th century.

John A. K. Willis (Northwestern University) THE ZIMMERMAN SITE (11LS13) GRID D SURFACE COLLECTION: AN INVESTIGATION INTO THE SPATIAL RELATIONSHIPS OF RECOVERED MATERIALS USING THE PC-BASED ATLAS/GIS PROGRAM [Session 2]

In 1991 the Northwestern University field school conducted a systematic collection of surface materials on a plowed area of Grid D of the Zimmerman site. Data on the materials recovered, such as counts and weights of fire-cracked rock, pottery, and chert, were entered by area into a computer database (Excel), and then transferred to Atlas/GIS. From this data, and maps digitized by the author, thematic maps were generated by Atlas/GIS which graphically illustrate the comparative locations of materials within the area surveyed. This paper will discuss and illustrate issues involved with this use of Atlas/GIS.

Charles O. Witty (Southern Illinois University at Edwardsville) — see *Brad H. Koldehoff*

the 1990s, the number of people in the UK who are aged 65 and over has increased from 10.5 million to 13.5 million, and the number of people aged 75 and over has increased from 4.5 million to 6.5 million (Office for National Statistics 2000).

There is a growing awareness of the need to address the needs of older people, and the UK Government has set out a strategy for the 21st century in the White Paper on *Ageing Better: Our Future as a Nation* (Department of Health 2000). This White Paper sets out a vision of a society in which older people are able to live well, and to contribute to their communities. It also sets out a number of key objectives for the government, including the need to improve the health and social care of older people, and to ensure that they are able to live independently for as long as possible.

One of the key objectives of the White Paper is to improve the health and social care of older people. This is to be achieved through a number of measures, including the need to improve the quality of care, to ensure that care is person-centred, and to ensure that older people are able to live independently for as long as possible. The White Paper also sets out a number of key objectives for the government, including the need to improve the health and social care of older people, and to ensure that they are able to live independently for as long as possible.

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