

# **Southeastern Archaeological Conference**



**Bulletin 29**  
**1986**

**BULLETIN 29**  
**SOUTHEASTERN ARCHAEOLOGICAL CONFERENCE**

**ABSTRACTS OF THE**  
**FORTY-THIRD**  
**SOUTHEASTERN ARCHAEOLOGICAL CONFERENCE**

**NASHVILLE, TENNESSEE**  
**NOVEMBER 5-8, 1986**

**Edited by**  
**Robert C. Mainfort, Jr.**  
**Carl Kuttruff**  
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**TENNESSEE DIVISION OF ARCHAEOLOGY**  
**DEPARTMENT OF CONSERVATION**  
**NASHVILLE, TENNESSEE**

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## PREFACE AND ACKNOWLEDGEMENTS

The 1986 Southeastern Conference marks the first time that it has been held in Nashville, Tennessee. This volume follows the precedent set with several previous volumes in that this number of the SEAC Bulletin is also devoted to the publication of the conference program, abstracts of the symposia and papers, and audio-visual materials that are to be presented at the 1986 Southeastern Conference in Nashville, Tennessee.

As local arrangements coordinator organizing this meeting has been an interesting and rewarding experience. It has only been possible through the help, cooperation, suggestions and support of numerous individuals and institutions. The idea of hosting the meeting in Nashville was first suggested to me by Marvin Jeter in 1984 just prior to the Southeastern Conference at Pensacola. Since that time his suggestions and advice have been most helpful. Judy Bense and Roger Nance were helpful in providing me with information on the two previous meetings, and many important suggestions and cautions.

I am grateful for the support SEAC officers including Jefferson Chapman, Jerry Milanich, Ann Cordell and Vin Steponaitis. A thanks is extended to the conference membership for their enthusiastic response to the call for papers and for those who organized the several symposia that are part of the program. A thanks is also extended to those who, when asked, without exception agreed to serve as chairpersons of the several contributed paper sessions. I also want to thank those who willingly agreed to present papers that were specifically requested.

The Tennessee State Museum has graciously agreed to co-sponsor an evening reception. A particular thanks must be expressed to Kent V. Flannery who accepted our invitation to be the keynote speaker.

Finally this conference would have not been a success without the generous support of the Tennessee Division of Archaeology and the Tennessee Department of Conservaiton.

Bob Mainfort served as program chairman and Mary Beth Trubitt was instrumental in the final editing of this bulletin and in typing the final copy for printing.

A generous thanks is extended to all who have provided me with their support and encouragement, and to those who have supported this conference both monetarily and with their help.

Carl Kuttruff  
Nashville, Tennessee  
October, 1986

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**1986 SEAC MEETING PROGRAM**

**WEDNESDAY, NOVEMBER 5**

**REGISTRATION** 1:00 - 9:00 P.M. Mezzanine, Radisson Plaza Hotel

**TOUR OF MOUND BOTTOM** 2:00 P.M.

**MEETING OF SOUTHEAST REGIONAL STATE ARCHAEOLOGISTS**

Organizer: Louis Larson, Jr.  
8:00 - 10:00 P.M. Jefferson Room

**BOOK ROAST**

Sponsored by the Alabama Department of Anthropology and the  
University of Alabama Press  
8:00 - 10:00 P.M. Location to be posted at Registration Desk

**BOOK DISPLAY** 3:00 - 5:00 P.M. Robertson Room

**THURSDAY, NOVEMBER 6**

**BOOK DISPLAY** 8:00 A.M. - 5:15 P.M. Robertson Room

**REGISTRATION** 8:00 A.M. - 5:00 P.M. Mezzanine, Radisson Plaza Hotel

**MORNING SESSION A Jefferson-Victory Room**

**SYMPOSIUM: LATE WOODLAND REGIONAL VARIATION IN THE SOUTHEAST**

Organizers and Chairs: Charles R. Cobb (Southern Illinois U) and Michael S. Nassaney  
(U Massachusetts)

- 8:00 ✓ C. R. Cobb (Southern Illinois U) and M. S. Nassaney (U Massachusetts) RE-  
NEWED PERSPECTIVES ON LATE WOODLAND REGIONAL VARIATION IN  
THE SOUTHEAST: PATTERNS AND PROCESSES.
- 8:20 ✓ M. J. Wagner (American Resources Group) LATE WOODLAND COMMUNITY  
PATTERNS AT THE JAMESTOWN SITE (21C4-14).
- 8:40 ✓ P. A. Webb (Southern Illinois U), M. L. Hargrave (Southern Illinois U), and  
C. R. Cobb (Southern Illinois U) THE DILLINGER COMPLEX OF SOUTHERN  
ILLINOIS: PHASE, STYLE ZONE, OR ADAPTATION? *Get copy if available*
- 9:00 ✓ C. Kuttruff (Tennessee Div. of Archaeology) LATE WOODLAND  
SETTLEMENT AND SUBSISTENCE IN THE LOWER KASKASKIA RIVER  
VALLEY, ILLINOIS.
- 9:20 ✓ T. Sussenbach (U Illinois) REDEFINING THE LATE WOODLAND CERAMIC  
ASSEMBLAGE IN THE NORTHERN LOWER ALLUVIAL VALLEY.

- 9:40 ✓ R. C. Dunnell (U Washington) and J. K. Feathers (U Washington) LATER WOODLAND MANIFESTATIONS OF THE MALDEN PLAIN, SOUTHEAST MISSOURI.
- 10:00 COFFEE BREAK
- 10:20 ✓ J. E. Bowen (Ohio State U) LATE WOODLAND SETTLEMENT PATTERNS IN THE LOWER SCIOTO VALLEY.
- 10:40 ✓ G. F. Schroedl (U Tennessee), and C. C. Boyd (Radford U) LATE WOODLAND CULTURE IN EAST TENNESSEE.
- 11:00 ✓ T. P. Rudolph (U California, Santa Barbara) THE LATE WOODLAND "PROBLEM" IN NORTH GEORGIA.
- 11:20 ✓ T. A. Kohler (Washington State U) and G. M. Johnson (Washington State U) FROM SHIRED ISLAND TO MCKEITHEN: WHAT WE DO, AND DON'T, KNOW ABOUT LATE WOODLAND IN NORTH FLORIDA.

**MORNING SESSION B      Johnson-Jackson Room**

**SYMPOSIUM:    ON-GOING 18th AND EARLY 19th CENTURY ARCHAEOLOGY IN THE SOUTHEASTERN UNITED STATES**

Organizers and Chairs:    Kenneth C. Carstens (Murray State U) and Nancy O'Malley (U Kentucky)

- 8:00    V. E. Noble (Illinois State U) CERAMICS FROM THE LAST FORT DE CHARTRES (11 R 127), A FRENCH GOVERNMENTAL CENTER ON THE MISSISSIPPI.
- 8:20    D. Keene (Loyola U, Chicago) THE ARCHAEOLOGY OF RECONSTRUCTION: EXCAVATIONS AT FORT DE CHARTRES.
- 8:40    K. C. Carstens (Murray State U) IN PURSUIT OF FORT JEFFERSON: A SUMMARY OF INVESTIGATIONS, 1980-1986.
- 9:00    W. L. Potter (Murray State U) and K. C. Carstens (Murray State U) FLORAL RECONSTRUCTION AND EARLY NINETEENTH CENTURY LAND SURVEYS IN WESTERN KENTUCKY: A TEST CASE FROM THE FORT JEFFERSON STUDY AREA.
- 9:20    N. O'Malley (U Kentucky) EARLY REDWARE PRODUCTION IN THE BLUEGRASS REGION OF KENTUCKY.
- 9:40    C. R. Steen (South Carolina Institute of Anthropology and Archaeology) THE WESSINGTON HOUSE ASSEMBLAGE: DOMESTIC REDWARES IN A COASTAL NORTH CAROLINA CONTEXT.

- 10:00 COFFEE BREAK
- 10:20 S. D. Smith (Tennessee Div. of Archaeology) FORT SOUTHWEST POINT ARCHAEOLOGICAL PROJECT, KINGSTON, TENNESSEE.
- 10:40 W. S. McBride (Michigan State U) THE VILLAGE BLACKSMITH IN THE ANTEBELLUM SOUTH: THE GRISWOLD SHOP, BARTON, MISSISSIPPI (1851-1860).
- 11:00 W. H. Radisch (U South Carolina) CLASSIFICATION AND INTERPRETATION OF METAL STARS FROM SANTA ELENA: SOME PROBLEMS AND POTENTIAL SOLUTIONS.
- 11:20 J. H. Wilson, Jr. (North Carolina Dept. of Cultural Resources) VERTEBRATE FAUNA USEAGE AT A CAROLINA FREED SLAVE COMMUNITY.
- 11:40 N. L. Trubowitz (Indiana U - Purdue U at Indianapolis) THE SEARCH FOR THE 18th CENTURY WEA: 1986 IUPUI FIELDWORK.

**MORNING SESSION C      Brentwood-Franklin Room**

**SYMPOSIUM:    ADVANCES IN SOUTHEASTERN ARCHEOLOGY 1966-1986:  
CONTRIBUTIONS OF THE FEDERAL ARCHEOLOGY PROGRAM**

Organizer and Chair:    Bennie C. Keel (National Park Service)

- 8:00    V. J. Knight, Jr. (U Alabama) HIGHLIGHTS OF THE FEDERAL ARCHAEOLOGICAL PROGRAM IN ALABAMA, 1966-1986.
- 8:20    H. A. Davis (Arkansas Archeological Survey) DOUBLE THE WORK, DOUBLE THE TREASURE: FEDERAL ARCHEOLOGY IN ARKANSAS, 1966-1986.
- 8:40    J. J. Miller (Florida Bureau of Archaeological Research) TWENTY YEARS OF FEDERAL ARCHAEOLOGY IN FLORIDA.
- 9:00    B. C. Keel (National Park Service) FEDERAL ARCHEOLOGY IN GEORGIA: AN OVERVIEW.
- 9:20    R. B. Clay (U Kentucky) TWENTY YEARS OF FEDERAL ARCHAEOLOGY IN KENTUCKY.
- 9:40    K. Byrd (Louisiana Division of Archaeology) THE FEDERAL ARCHAEOLOGY PROGRAM IN LOUISIANA: ITS ACCOMPLISHMENTS AND FUTURE POSSIBILITIES.
- 10:00    COFFEE BREAK
- 10:20    R. M. Thorne (U Mississippi) MISSISSIPPI ARCHAEOLOGY AND THE FEDERAL ARCHAEOLOGY PROGRAM: OR WHY WE ARE BEGINNING TO KNOW WHAT WE THINK WE KNOW.

- 10:40 M. A. Mathis (North Carolina Div. of Archives and History) NORTH CAROLINA ARCHAEOLOGY SINCE 1966: TWO DECADES OF FEDS OVER THE SHOULDER.
- 11:00 B. Rippeteau and S. D. Smith (South Carolina Institute of Archaeology and Anthropology) SOUTH CAROLINA'S FEDERAL ARCHAEOLOGY: THE ANNUAL SCORE SINCE 1966.
- 11:20 J. Chapman (U Tennessee) THE FEDERAL ARCHAEOLOGY PROGRAM IN TENNESSEE, 1966-1986: AN ARCHAEOLOGICAL SECOND COMING.
- 11:40 Discussants: Bruce Smith (Smithsonian Institution), Christopher Peebles (Indiana University), and J. Bennett Graham (Tennessee Valley Authority)

**AFTERNOON SESSION A      Jefferson-Victory Room**

**SYMPOSIUM: LATE WOODLAND REGIONAL VARIATION IN THE SOUTHEAST  
(continued)**

Organizers and Chairs: Charles R. Cobb (Southern Illinois U) and Michael S. Nassaney (U Massachusetts)

- 1:00 ✓ R. J. Widmer (U Houston) CHIEFDOM DEVELOPMENT IN ABORIGINAL SOUTH FLORIDA.
- 1:20 ✓ M. C. Hill (U Massachusetts) A STUDY IN ADAPTATION: THE DYNAMIC INTERPLAY OF CULTURE, BIOLOGY, AND ENVIRONMENT FOR A LATE WOODLAND POPULATION IN ALABAMA.
- 1:40 ✓ M. S. Nassaney (U Massachusetts) MODELING LATE WOODLAND SOCIETAL INTEGRATION: A CENTRAL ARKANSAS CASE STUDY.
- 2:00 Discussants: ✓ James Brown (Northwestern U) and ✓ Jon D. Muller (Southern Illinois U)

**AFTERNOON SESSION B      Johnson-Jackson Room**

**SYMPOSIUM: ARCHAEOLOGY OF THE HISTORIC SOUTHEASTERN INDIANS**

Organizers and Chairs: Gregory A. Waselkov (Auburn U), Craig T. Sheldon, Jr. (Auburn U, Montgomery) and John W. Cottier (Auburn U)

- 1:00 J. M. Mitchem (Florida State Museum) and D. L. Hutchinson (U Illinois, Urbana-Champaign) THE TATHAM MOUND, CITRUS COUNTY, FLORIDA: THIRD FIELD SEASON.
- 1:20 D. H. Dye (Memphis State U), C. Hudson (U Georgia), and D. F. Morse (Arkansas State U) INITIAL EUROPEAN CONTACT IN THE MID-SOUTH: THE DE SOTO ENTRADA (1540-1543) AND INITIAL COLONIAL EXPLORATIONS (1673-1700).
- 1:40 R. Marrinan (Florida State U) ACCULTURATION IN THE MISSION SETTING: SPANISH FLORIDA, 1565-1704.



- 2:00 D. H. Thomas (American Museum of Natural History) A PRELIMINARY REPORT ON THE ARCHAEOLOGY OF MISSION SANTA CATALINA DE GUALE, GEORGIA.
- 2:20 J. P. Brain (Peabody Museum, Harvard U) THE TUNICA THROUGH HISTORY AS IDENTIFIED ARCHAEOLOGICALLY.
- 2:40 I. W. Brown (Peabody Museum, Harvard U) FRIEND OR FOE? THE CALUMET CEREMONY IN THE LOWER MISSISSIPPI VALLEY AND ITS ARCHAEOLOGICAL MANIFESTATION.
- 3:00 T. R. Kidder (Harvard U) PROTOHISTORIC AND EARLY HISTORIC CULTURE DYNAMICS IN SOUTHEAST ARKANSAS AND NORTHEAST LOUISIANA, A.D. 1500-1700.
- 3:20 M. T. Smith (Garrow & Associates, Inc.) ABORIGINAL POPULATION MOVEMENTS IN THE EARLY HISTORIC PERIOD INTERIOR SOUTHEAST.
- 3:40 G. A. Waselkov (Auburn U) SEVENTEENTH CENTURY MIDDLEMAN TRADE IN THE INTERIOR SOUTHEAST.
- 4:00 H. T. Ward (Research Labs. of Anthropology, U North Carolina) and R. P. S. Davis, Jr. (Research Labs. of Anthropology, U North Carolina) AN ARCHAEOLOGICAL INVESTIGATION OF CULTURE CHANGE AT A LATE SEVENTEENTH CENTURY INDIAN VILLAGE IN THE NORTH CAROLINA PIEDMONT.
- 4:20 B. H. Riggs (U Tennessee) SOCIOECONOMIC VARIATION IN FEDERAL PERIOD OVERHILL CHEROKEE ARCHAEOLOGICAL ASSEMBLAGES.
- 4:40 Discussant: Robert C. Mainfort, Jr. (Tennessee Div. of Archaeology)

**AFTERNOON SESSION C                      Brentwood-Franklin Room**

**SYMPOSIUM: TAPHONOMY AND SITE FORMATION PROCESSES**

Organizers and Chairs: Walter E. Klippel (U Tennessee) and Thomas R. Whyte (U Tennessee)

- 1:00 T. J. Martin (Illinois State Museum) and B. E. Bastian (Gilbert/Commonwealth, Inc.) STATUS AND CHOICE IN THE FORMATION OF HISTORIC FAUNAL ASSEMBLAGES: AN EXAMPLE FROM ASHEVILLE, NORTH CAROLINA.
- 1:20 E. J. Reitz (U Georgia) URBAN SITE FORMATION PROCESSES AND THE FAUNAL RECORD.
- 1:40 R. L. Lyman (U Missouri) PLOWZONE ZOOARCHAEOLOGY: WHAT WE CAN LEARN.
- 2:00 J. F. Custer (Center for Archaeological Research, U Delaware) and K. R. Doms (Center for Archaeological Research, U Delaware) ANALYSIS OF OYSTER SHELL MORPHOLOGY AND GROWTH RINGS: IMPLICATIONS FOR SITE FORMATION PROCESS.

- 2:20 C. R. Falk SITE FORMATION PROCESSES AND THE ANALYSIS OF VERTEBRATE ASSEMBLAGES RECOVERED FROM LATE PREHISTORIC VILLAGE SITES IN NORTH CENTRAL, SOUTH DAKOTA.
- 2:40 M. E. Fogarty (U Tennessee) FEATURE FUNCTION AND FAUNAL FREQUENCIES.
- 3:00 T. R. Whyte (U Tennessee) PITFALLS IN PREHISTORY: AN EXPERIMENTAL STUDY OF SMALL ANIMAL REMAINS IN ARCHAEOLOGICAL PIT FEATURES.
- 3:20 W. E. Klippel (U Tennessee) and P. W. Parmalee (U Tennessee) RAPTOR PREDATION AND THE ARCHAEOLOGICAL RECORD.
- 3:40 B. W. Styles (Illinois State Museum) and J. R. Purdue (Illinois State Museum) THE DETECTION OF HUMAN AND NONHUMAN ACCUMULATIONS OF BONE AT MODOC ROCK SHELTER.
- 4:00 R. Hoffman (U Tennessee) THE EASTERN WOODRAT (NEOTOMA FLORIDANA) AS A TAPHONOMIC FACTOR IN ROCKSHELTER SITES.
- 4:20 L. Snyder (U Tennessee) and W. Klippel (U Tennessee) CANID MODIFICATION OF SKELETAL MATERIALS AND FAUNAL REMAINS FROM ARCHAEOLOGICAL SITES.
- 4:40 E. S. Wing (Florida State Museum) MODERN MIDDEN EXPERIMENT.

**AFTERNOON SESSION D      Jefferson-Victory Room**

**CONTRIBUTED PAPERS:      MIDDLE TENNESSEE ARCHAEOLOGY**

Chair: Carl Kuttruff (Tennessee Division of Archaeology)

- 3:00 M. S. Prichard (Tennessee Department of Conservation) TENNESSEE'S ARCHAEOLOGICAL CONSERVATION.
- 3:20 G. F. Fielder (Tennessee Div. of Archaeology) MISSISSIPPIAN SITES IN MIDDLE TENNESSEE: A REVIEW OF WHAT'S LEFT.
- 3:40 B. Lindstrom (Middle Cumberland Archaeological Society) THE ANDERSON SITE (40WM9): A MIDDLE ARCHAIC OCCUPATION IN MIDDLE TENNESSEE.
- 4:00 J. T. Dowd (Middle Cumberland Archaeological Society) STONE BOX GRAVES: ABNORMALITIES AND PATTERNS.
- 4:20 C. Kuttruff (Tennessee Div. of Archaeology) MOUND BOTTOM AND PACK SITES.
- 4:40 S. Williams (Harvard U) HAYWOOD, THRUSTON, AND OTHERS: PIONEERS IN TENNESSEE ARCHAEOLOGY -- THEIR IMPACT TODAY.

**SEAC BUSINESS MEETING** 5:15 - 6:00 P.M. Johnson-Jackson Room

**TENNESSEE STATE MUSEUM RECEPTION** 6:30 - 8:30 P.M.  
Fifth and Deadrick Streets

**SEAC FILM FESTIVAL** 8:30 - 10:30 P.M. Johnson-Jackson Room  
Organizers: C. Wesley Cowan and Bruce D. Smith

**TURPIN INDIANS.** Submitted by the Cincinnati Museum of Natural History. (1940s film of excavations of a Fort Ancient Site in Hamilton County, Ohio.)

**ST. CATHERINES: AN ISLAND IN TIME.** Submitted by David H. Thomas (American Museum of Natural History). (Excavation of the 16th - 17th century Spanish mission, Santa Catalina De Gaule.)

**WINDOWS IN TIME: THE MARIE SALINE SITE.** Submitted by Shelia D. Lewis (U. S. Corps of Engineers, Vicksburg District). (Cultural Resource Evaluation in the Ouachita-Black Navigation Project area in Southeast Arkansas.)

**RECENT RESEARCH ON THE ORIGINS OF AGRICULTURE IN THE SOUTHEAST** (Working Title). Submitted by Bruce D. Smith (Smithsonian Institution) and C. Wesley Cowan (Cincinnati Museum of Natural History).

**STU NEITZEL: THE BUCKET OF BLOOD.** Submitted by Janet Fort, Van France and Gay Fortune (Clarksdale Mississippi Public Museum). (Robert S. Neitzel's 1979 relation of experiences at Teeny's Cafe, infamously known as "The Bucket of Blood".)

### **FRIDAY, NOVEMBER 7**

**REGISTRATION** 8:00 A.M. - 5:00 P.M. Mezzanine, Radisson Plaza Hotel

**BOOK DISPLAY** 8:00 A.M. - 5:15 P.M. Robertson Room

#### **MORNING SESSION A Jefferson-Victory-Woodland Room**

##### **CONTRIBUTED PAPERS: MISSISSIPPIAN ARCHAEOLOGY I**

Chair: R. Barry Lewis (U Illinois, Urbana-Champaign)

8:00 T. R. Pauketat (U Michigan) MISSISSIPPIAN CERAMIC REFUSE AS AN INDEX OF OCCUPATION SPAN: AN AMERICAN BOTTOM EXAMPLE.

8:20 J. M. Schock (Western Kentucky U) EXCAVATION OF 40-OB-6: AN EARLY MISSISSIPPIAN CEMETERY AT REELFOOT LAKE IN NORTHWESTERN TENNESSEE.

8:40 C. A. Turnbow and W. E. Sharp (U Kentucky) THE MUIR SITE: AN UPLAND FORT ANCIENT VILLAGE IN CENTRAL KENTUCKY.

- 9:00 ✓ J. D. Rogers (U Chicago) SETTLEMENT CONTEXTS FOR SHIFTING AUTHORITY IN THE ARKANSAS BASIN.
- 9:20 K. W. Wesler (Wickliffe Mounds Research Center, Murray State U) SALT-BOILING AND THE WICKLIFFE FUNNEL IN WEST AFRICA.
- 9:40 D. C. Wilkie (Southeast Missouri State U) TOWOSAHGY REVISITED: TEMPLE MOUND CENTER IN SOUTHEAST MISSOURI.
- 10:00 COFFEE BREAK
- 10:20 J. Muller (Southern Illinois U) MISSISSIPPIAN PRODUCTION MODES: THE LOWER OHIO VALLEY.
- 10:40 ✓ J. H. House (Southern Illinois U) THE MISSISSIPPIAN SEQUENCE IN THE MENARD LOCALITY, EASTERN ARKANSAS.
- 11:00 ✓ R. B. Lewis (U Illinois, Urbana-Champaign) THE LATE MISSISSIPPI PERIOD IN KENTUCKY.
- 11:20 ✓ R. C. Mainfort (Tennessee Div. of Archaeology), T. H. Bianchi (Tennessee Div. of Archaeology) and W. R. Yarnell (Tennessee Div. of Archaeology) EMERGENT MISSISSIPPIAN OCCUPATION IN THE REELFOOT LAKE AREA.
- 11:40 ✓ G. P. Smith (Memphis State U) THE WALLS PHASE AND ITS NEIGHBORS.

**MORNING SESSION B      Johnson-Jackson Room**

**CONTRIBUTED PAPERS:      PALEO-INDIAN AND ARCHAIC**

Chair: Pam A. Schenian (Murray State U)

- 8:00 ✓ D. B. Blanton (Garrow & Associates, Inc.) and F. Snow (South Georgia College) PALEO-INDIAN AND EARLY ARCHAIC LITHIC ASSEMBLAGE COMPOSITION IN SOUTH GEORGIA: EVIDENCE FROM THE FERONIA LOCALITY.
- 8:20 ✓ J. Bowen (Ohio State U) EXCAVATIONS AT AN ARCHAIC BASE CAMP IN SOUTHERN OHIO.
- 8:40 ✓ P. A. Schenian (Murray State U) PRELIMINARY REPORT OF INVESTIGATIONS AT THE CRICK SITE (15CW96), A WESTERN KENTUCKY TURKEY-TAIL CACHE.
- 9:00 J. D. Nance (Simon Fraser U) ARCHAIC CULTURE IN THE LOWER TENNESSEE-CUMBERLAND-OHIO REGION.
- 9:20 C. R. Ison (U.S. Forest Service) PROVIDING A BETTER UNDERSTANDING OF TERMINAL ARCHAIC SUBSISTENCE: A VIEW FROM COLD OAK SHELTER.

- ✓ 9:40 ✓ A. C. Goodyear (South Carolina Institute of Archaeology & Anthropology), R. Y. Wetmore (South Carolina Institute of Archaeology & Anthropology) and D. J. Colquhoun (U South Carolina) ARCHAIC PERIOD OCCUPATIONS AT THE NIPPER CREEK SITE, 38RD18, RICHLAND COUNTY, SOUTH CAROLINA.
- 10:00 COFFEE BREAK
- 10:20 ✓ M. Trinkley (Chicora Foundation, Inc.) NON-SHELL LATE ARCHAIC-EARLY WOODLAND STALLINGS PHASE SITES: ADDITIONAL DATA ON SUBSISTENCE AND SETTLEMENT FROM THE SOUTHERN SOUTH CAROLINA COAST.
- 10:40 T. A. Church (Appalachian State U) A METRICAL STUDY OF SAVANNAH RIVER POINTS FROM THE NORTH CAROLINA MILLER COLLECTION.
- 11:00 P. Pacheco (Ohio State U), C. Janini (Ohio State U) and P. Scuilli (Ohio State U) LONG BONE VARIABILITY, LIMB PROPORTIONS AND STATURE IN THE TERMINAL LATE ARCHAIC OF OHIO.

**MORNING SESSION C      Brentwood-Franklin Room**

**CONTRIBUTED PAPERS:      CULTURAL RESOURCE MANAGEMENT AND SURVEYS**

Chair:    Jay K. Johnson (U Mississippi)

- 8:00    K. P. Cannon (U Tennessee)    NATURAL AND HUMAN IMPACTS ON ARCHAEOLOGICAL RESOURCES IN THE WATTS BAR RESERVOIR, EAST TENNESSEE.
- 8:20    H. A. MacCord, Sr.    THE VIRGINIA PLAN: ARCHAEOLOGY BY ECHELONS.
- 8:40    J. A. Bense (U West Florida)    THE CITY ARCHAEOLOGICAL ORDINANCE AND ARCHAEOLOGICAL MANAGEMENT PROGRAM IN PENSACOLA, FLORIDA.
- 9:00    J. R. Lloyd (U West Florida)    INVESTIGATIONS IN A FIRST SPANISH PERIOD (CIRCA 1752-1762) COMMUNITY REFUSE AREA IN PENSACOLA, FLORIDA.
- 9:20    L. C. Steponaitis (SUNY, Binghamton)    CHANGING SETTLEMENT PATTERNS IN COASTAL MARYLAND, 4000 B.C. - A.D. 1600.
- 9:40    B. Purrington (Southwest Missouri State U)    THE PISGAH SURVEY: UPLAND ARCHAEOLOGY IN THE APPALACHIAN SUMMIT OF NORTH CAROLINA.
- 10:00    COFFEE BREAK
- 10:20    I. C. Beckerman (Pennsylvania State U)    THE GREATER YADKIN RIVER ARCHAEOLOGICAL SURVEY PROJECT: SETTLEMENT PATTERNS, SETTLEMENT SYSTEMS.
- 10:40    C. Carr (Arizona State U)    NEW RADIOGRAPHIC METHODS FOR STUDYING CERAMICS.

- 11:00 J. K. Johnson (U Mississippi), T. L. Sever (National Space and Technology Lab.) and S. L. H. Madry (National Space and Technology Lab.) REMOTE SENSING AND ARCHAEOLOGICAL RESEARCH DESIGN IN NORTH MISSISSIPPI.
- 11:20 W. J. Bennett, Jr. (Archeological Assessments, Inc.) and L. M. Smith (Waterways Experiment Station) THE RED RIVER ARCHEOLOGICAL PROJECT REMOTE SENSING AND SETTLEMENT PATTERN ANALYSIS.

**AFTERNOON SESSION A                      Jefferson-Victory-Woodland Room**

**CONTRIBUTED PAPERS:      MISSISSIPPIAN ARCHAEOLOGY II**

Chair: Vincas P. Steponaitis (SUNY, Binghamton)

- 1:00 ✓ D. H. Dye (Memphis State U) and D. R. Stevenson (Memphis State U) DENTAL TRAITS AND KINSHIP: AN EXAMPLE FROM THE LATE MISSISSIPPIAN CUMBERLAND CULTURE.
- 1:20 ✓ C. C. Boyd, Jr. (Radford U) RECENT INVESTIGATIONS OF THE PLUM GROVE SITE (40WG17), WASHINGTON COUNTY, TENNESSEE.
- 1:40 S. L. Horton (Appalachian State U) CLAY CONSTITUENTS OF NORTH CAROLINA POTTERY EXAMINED BY XRD.
- 2:00 ✓ C. Judge (U South Carolina) THE WATEREE VALLEY ABORIGINAL VESSEL MORPHOLOGICAL ASSEMBLAGE: FORM AND PHYSICAL ATTRIBUTES AS INDICATORS OF FUNCTION.
- 2:20 ✓ M. K. Pope (SUNY, Binghamton) MICRODRILLS FROM THE MOUNDVILLE REGION: TECHNOLOGY, FUNCTION, AND CONTEXT.
- 2:40 ✓ V. P. Steponaitis (SUNY, Binghamton) THE UNIVERSITY OF ALABAMA EXCAVATIONS AT 1TU50, A MOUNDVILLE I PHASE CENTER IN THE BLACK WARRIOR VALLEY.
- 3:00 ✓ M. Williams (LAMAR Institute and U Georgia) and G. Shapiro (Florida Bur. of Archaeological Research and LAMAR Institute) SHOULDERBONE WAS A 14TH CENTURY FRONTIER TOWN.
- 3:20 ✓ D. J. Hally (U Georgia) THE MISSISSIPPI PERIOD IN THE VALLEY AND RIDGE SECTION OF NORTHWEST GEORGIA.
- 3:40 ✓ A. F. Ramenofsky (Louisiana State U) A CONSIDERATION OF STABILITY OR CHANGE IN THE SIXTEENTH CENTURY SOUTHEAST.
- 4:00 ✓ D. G. Anderson (Garrow & Associates, Inc.) STABILITY AND CHANGE IN CHIEFDOM-LEVEL SOCIETIES: AN EXAMINATION OF MISSISSIPPIAN POLITICAL EVOLUTION ON THE SOUTH ATLANTIC SLOPE.
- 4:20 ✓ S. Kowaleski (U Georgia) A CONCEPTUAL FRAMEWORK FOR SOCIAL EVOLUTION.

**AFTERNOON SESSION B**

**Johnson-Jackson Room**

**SYMPOSIUM: ARCHAEOLOGICAL TEXTILES OF THE SOUTHEAST**

Organizer and Chair: L. R. Sibley (Ohio State U)

- 1:00 K. A. Jakes (Center for Archaeological Sciences, U Georgia) ANALYTICAL METHODS FOR THE STUDY OF PREHISTORIC TEXTILES.
- 1:20 P. K. Hunt (Ohio State U) AN INVESTIGATION OF FABRIC FRAGMENTS RECOVERED FROM A SLAVE CEMETERY IN SOUTH CAROLINA.
- 1:40 J. T. Kuttruff (Ohio State U) A TWINED BAG FROM BIG BONE CAVE, TENNESSEE: MANUFACTURE, REPAIR, AND USE.
- 2:00 L. R. Sibley (Ohio State U), K. A. Jakes (Center for Archaeological Sciences, U Georgia), and V. S. Wimberley INFERRING BEHAVIOR AND FUNCTION FROM ARCHEOLOGICAL TEXTILE REMAINS.

**AFTERNOON SESSION C**

**Brentwood-Franklin Room**

**CONTRIBUTED PAPERS: FAUNAL AND FLORAL STUDIES**

Chair: Mary Eubanks (Vanderbilt U)

- 1:00 L. A. Newsom (U Florida) and D. S. Decker (Texas A&M) ARCHAEOLOGICAL CUCURBITACEAE FROM PENINSULAR FLORIDA.
- 1:20 G. M. Crothers (U Tennessee) A GOURD CONTAINER FROM A DRY CAVE IN CENTRAL TENNESSEE.
- 1:40 M. Eubanks (Vanderbilt U) THE ORIGIN OF MAIZE: A NEW THEORY.
- 2:00 K. M. Grimes (U South Carolina) DIETARY CHOICES AT THE MULBERRY MOUND SITE.
- 2:20 D. Johnson (Appalachian State U) SEASONALITY OF RANGIA FROM PATARATA 52, VERACRUZ, MEXICO.
- 2:40 I. R. Quitmyer (Florida State Museum, U Florida), D. F. Cannon (Florida State Museum, U Florida), and D. S. Jones (Florida State Museum, U Florida) PALEOSEASONALITY DETERMINATION BASED ON INCREMENTAL SHELL GROWTH IN THE HARD CLAM, MERCENARIA MERCENARIA, AND ITS IMPLICATIONS FOR FUTURE ANALYSIS OF COASTAL SHELL MIDDENS FOUND ALONG THE GEORGIA COAST.
- 3:00 J. P. Whelan, Jr. (Coastal Environments, Inc.) A PROVISIONAL ALLOMETRIC-SCALING FORMULA FOR THE CLAM RANGIA CUNEATA (GRAY).

## **MOUNDVILLE PLANNING CONFERENCE**

Organizer: Phil Krebs (University of Alabama)  
3:00 - 4:30 P.M. Johnson-Jackson Room

### **KEYNOTE SESSION**

Kent V. Flannery (University of Michigan) THE RISE OF CHIEFDOMS IN  
FORMATIVE MEXICO: A PATTERN WITH POSSIBLE IMPLICATIONS FOR  
THE SOUTHEAST.  
5:30 - 6:15 P.M. Jefferson-Victory-Woodland Room

### **DANCE: GUM BRANCH HEARTBREAKERS**

9:00 P.M. - 12:00 A.M. Jefferson-Victory-Woodland Room  
Cash Bar

## **SATURDAY, NOVEMBER 8**

**BOOK DISPLAY** 8:00 A.M. - 12:00 P.M. Robertson Room

### **MORNING SESSION A Jefferson-Victory Room**

#### **SYMPOSIUM: NEW DIRECTIONS IN FIELD ARCHAEOLOGY: PAPERS IN HONOR OF J. B. GRAHAM**

Organizer and Chair: Robert H. Lafferty III (Mid-Continental Research Associates)

- 8:00 R. H. Lafferty III (Mid-Continental Research Associates) INTRODUCTION.
- 8:20 S. R. Ahler (U Kentucky) ARCHAIC SETTLEMENT SYSTEMS IN THE MODOC  
LOCALITY - OLD TECHNIQUES AND NEW INTERPRETATIONS.
- 8:40 S. A. Ahler (U North Dakota) and M. J. Root (U North Dakota) WHERE  
TO DIG? ASSESSING SURFACE AND SUBSURFACE ARTIFACT  
PATTERNING.
- 9:00 R. R. Polhemus (U Tennessee) SMALL DIAMETER CORING: A NEW  
ANSWER FOR OLD PROBLEMS.
- 9:20 M. C. Charles (Nickens and Associates) CULTURAL VERSUS ARBITRARY  
STRATIGRAPHIC UNITS.
- 9:40 W. S. Spears (Tennessee Div. of Archaeology) PRACTICAL USES AND  
APPLICATIONS OF THE VCR.
- 10:00 COFFEE BREAK
- 10:20 G. J. Cantley (Arizona State U) POLLEN ANALYSIS AND THE  
ARCHAEOLOGICAL RECORD.



- 10:40 R. H. Lafferty III (Mid-Continental Research Associates) NEW DESIGNS OF WATERSCREENS.
- 11:00 L. S. Alexander (U Alabama), C. Davis (U Alabama), D. Lenhardt (GAI Consultants), and R. Skrivan (U Alabama) ARCHAEOLOGICAL EXCAVATIONS AT 22TS954, TISHOMINGO COUNTY, MISSISSIPPI.
- 11:20 G. G. Cole (Alabama Historical Commission) THE MURPHY HILL SITE: A RE-EVALUATION OF THE COPENA CONCEPT.
- 11:40 C. B. Oakley (U Alabama) ADMINISTRATIVE METHODS INVOLVED IN MODERN DAY ARCHAEOLOGICAL RESEARCH.
- 12:00 Discussants: Betty Duggan (U Tennessee) and Brian M. Butler (Southern Illinois U)

**MORNING SESSION B Johnson-Jackson Room**

**CONTRIBUTED PAPERS: FLORIDA ARCHAEOLOGY**

Chair: William Marquardt (University of Florida)

- 8:00 M. F. Dickinson (Water and Air Research, Inc.) A PRELIMINARY ANALYSIS OF SETTLEMENTS PATTERNS ON FORT GEORGE ISLAND.
- 8:20 K. J. Walker (U Florida) UTILIZATION OF ANIMAL FOOD RESOURCES IN THE CALUSA AREA.
- 8:40 G. M. Johnson (Washington State U) and T. A. Kohler (Washington State U) TOWARD A BETTER UNDERSTANDING OF NORTH PENINSULAR GULF COAST FLORIDA PREHISTORY: ARCHAEOLOGICAL RECONNAISSANCE IN DIXIE COUNTY.
- 9:00 C. Newman (Archaeological and Historical Conservancy, Inc.) ARCHAEOLOGICAL INVESTIGATIONS AT THE CHEETUM SITE, DADE COUNTY, FLORIDA.
- 9:20 W. H. Marquardt (U Florida) ENVIRONMENT AND PRODUCTION IN PREHISTORIC SOUTHWEST FLORIDA.

**MORNING SESSION C Brentwood-Franklin Room**

**CONTRIBUTED PAPERS: WOODLAND PERIOD RESEARCH**

Chair: Richard Jefferies (University of Kentucky)

- 8:00 K. L. Collis (Wake Forest U) MIDDLE WOODLAND MARINE SHELL BEADS FROM THE DONNAHA SITE, NORTH CAROLINA.
- 8:20 L. B. Wayne (Water and Air Research, Inc.) SWIFT CREEK OCCUPATION IN THE ALTAMAHA DELTA.

- 8:40 G. R. Milner (Pennsylvania State U) and R. W. Jefferies (U Kentucky) MOUND CONSTRUCTION, MORTUARY PRACTICES, AND PALEO-DEMOGRAPHY: A REEXAMINATION OF AN ADENA MOUND IN KENTUCKY.
- 9:00 J. Ford (U Mississippi) THE LITTLE SPRING CREEK MOUND: A PRELIMINARY REPORT.
- 9:20 C. L. Hall (U Tennessee) BUGTUSSE ROCKSHELTER: TEST EXCAVATIONS AT A DRY ARCHAEOLOGICAL SITE.
- 9:40 J. W. Hatch (Pennsylvania State U) THE SOURCING AND DATING OF HOPEWELL OBSIDIAN: IMPLICATIONS FOR THE NATURE AND CHRONOLOGY OF OBSIDIAN USE IN THE MIDWEST.

**MORNING SESSION D Johnson-Jackson Room**

**CONTRIBUTED FILMS AND VIDEOS 10:00 - 12:00 A.M.**

P. E. Hooge (Licking County Archaeology and Landmarks Society) THE HISTORY OF OHIO ARCHAEOLOGY - THE PERSONALITIES. HUMAN VALUES AND THE WORTH OF OHIO'S PREHISTORIC EARTHWORKS. ETHICS IN ARCHAEOLOGY: CONFLICTS IN COLLECTING.

T. W. Gatus (Association for Anthropological Research, Inc.) KENTUCKY'S PREHISTORIC INDIAN TRADITIONS.

**MOUND BOTTOM TOUR 2:00 P.M.**

**SUNDAY, NOVEMBER 9**

**MOUND BOTTOM TOUR 10:00 A.M.**

## TITLES AND ABSTRACTS OF SYMPOSIA

(In order of presentation at the 1986 SEAC meeting.)

### LATE WOODLAND REGIONAL VARIATION IN THE SOUTHEAST

Organizers and Chairs: Charles R. Cobb (Southern Illinois University) and  
Michael S. Nassaney (University of Massachusetts)

This symposium will underscore the wide range of societal organization during the Late Woodland period in the prehistoric Southeastern United States. Regional variation is expressed along axes of subsistence intensification, settlement interaction, and social integration. Comparison and integration of these data throughout the Southeast will represent a timely and significant contribution toward understanding Late Woodland regional variability.

Contributions will focus on a limited segment of the Late Woodland archaeological sequence to facilitate comparison by developing regional syntheses for the period A.D. 600 - 800. The emphasis will be on explicitly addressing 1) the kinds of explanatory models used to understand social integration and 2) the relationships among critical variables affecting social organization such as exchange networks, surplus mobilization, social differentiation, demography, subsistence, settlement, and environment. These dimensions will provide the basis for investigating the nature of societal stability and transformation subsequent to the Middle Woodland and prior to the Mississippi periods. (11/6, AM)

Discussants: James Brown (Northwestern University) and Jon D. Muller (Southern Illinois University)

### ON-GOING EIGHTEENTH AND EARLY NINETEENTH CENTURY ARCHAEOLOGY IN THE SOUTHEASTERN UNITED STATES

Organizers and Chairs: Kenneth C. Carstens (Murray State University) and  
Nancy O'Malley (University of Kentucky)

### ADVANCES IN SOUTHEASTERN ARCHEOLOGY 1966-1986: CONTRIBUTIONS OF THE FEDERAL ARCHEOLOGY PROGRAM

Organizer and Chair: Bennie C. Keel (National Park Service)

In celebrating the 20th Anniversary of the National Historic Preservation Act of 1966 the National Park Service and the Southeastern Archaeological Conference will

provide the opportunity for specialists representing each of the core Southeastern states to review substantive additions to the knowledge, methods, techniques, and theory of the region's archeology and evaluate the contributions made during this period by the Federal Archeological Program. (11/6, AM)

Discussants: Bruce Smith (Smithsonian Institution), Christopher Peebles (Indiana University), and J. Bennett Graham (Tennessee Valley Authority)

#### ARCHAEOLOGY OF THE HISTORIC SOUTHEASTERN INDIANS

Organizers and Chairs: Gregory A. Waselkov (Auburn University), Craig T. Sheldon (Auburn University, Montgomery) and John W. Cottier (Auburn University)

What is the anthropological potential of contact period archaeological remains in the Southeast? A series of papers will be presented, each focusing on a current research problem of anthropological interest that is being effectively addressed using archaeological data from historic period Indian sites. The goals are to generate wider interest in the subfield and to demonstrate the considerable theoretical and methodological importance of contact period archaeology. (11/6, PM)

Discussant: Robert C. Mainfort, Jr. (Tennessee Division of Archaeology)

#### TAPHONOMY AND SITE FORMATION PROCESSES

Organizers and Chairs: Walter E. Klippel (University of Tennessee) and Thomas R. Whyte (University of Tennessee)

Faunal analysis in archaeology has advanced considerably since the early days of simple species tabulation. Investigating the faunal record to gain an understanding of past human lifeways and culture process has demanded finer methods of recovery, identification, and analysis. We have also aptly realized the need to gain an understanding of the natural and cultural processes that were active in the creation of patterning in faunal deposits. This symposium brings together papers covering a wide range of topics on site formation and taphonomy. They represent the dramatic advancement of zooarchaeological methodology enabling us to rethink old problems and glean more information from the archaeological faunal record. (11/6, PM)

#### ARCHAEOLOGICAL TEXTILES OF THE SOUTHEAST

Organizer and Chair: L. R. Sibley (Ohio State University)

NEW DIRECTIONS IN FIELD ARCHAEOLOGY: PAPERS IN HONOR OF J. B. GRAHAM

Organizer and Chair: Robert H. Lafferty, III (Mid-Continental Research Associates)

Discussants: Betty Duggan (University of Tennessee), Brian M. Butler (Southern Illinois University)

## ABSTRACTS OF PAPERS

(In alphabetical order by last name of author or senior co-author. Junior co-authors' last names are also included in the alphabetical listing with reference to their senior co-authors.)

Ahler, Stanley A. (U North Dakota) and Matthew J. Root (U North Dakota) WHERE TO DIG? ASSESSING SURFACE AND SUBSURFACE ARTIFACT PATTERNING.

Seeing into the ground and knowing where to place excavation units has always been a difficult task for field archeologists less gifted and talented in this domain than J. B. Graham. This problem becomes even more critical when the fate of large sites hinges on the productivity of a few small test units. In certain geomorphological contexts, accurate maps of surface artifact patterning can assist greatly with this problem. The point-quarter survey method is discussed as a means for mapping pattern, density, and content in surface artifacts. The advantages of point-quarter survey for site boundary definition and management planning are also discussed. Problems of correlation between surface and subsurface artifact patterning occur in many geologic contexts. Examples of these problems are discussed by means of comparison of point-quarter surface data with subsurface data derived from systematic test excavation and auger sampling. (11/8, 8:40 AM)

Ahler, Steven R. (U Kentucky) ARCHAIC SETTLEMENT SYSTEMS IN THE MODOC LOCALITY — OLD TECHNIQUES AND NEW INTERPRETATIONS.

In 1971, investigation of Hamilton burial mounds under the direction of J. B. Graham provided this archaeologist with his first exposure to the problems of settlement archaeology. Recent excavations and survey in the vicinity of the Modoc Rock Shelter in southwestern Illinois provide data on changing settlement patterns and settlement systems in the Archaic period. Dalton and Early Archaic settlements seem to be randomly distributed over the upland landscape. Middle Archaic patterns show strongly non-random distributions, and exhibit marked changes in the characteristics of site location, assemblage diversity and site size. It is proposed that environmental, demographic, and social factors all contribute to these changes in human organization during the Middle Archaic. (11/8, 8:20 AM)

Alexander, L. S. (U Alabama), C. Davis (U Alabama), D. Lenhardt (GAI Consultants), and R. Skrivan (U Alabama) ARCHAEOLOGICAL EXCAVATIONS AT 22TS954, TISHOMINGO COUNTY, MISSISSIPPI.

Site 22TS954 is a stratified, multicomponent site located on a major tributary of the Tombigbee River, in northeast Mississippi. The project was sponsored by the U.S. Army Corps of Engineers, Nashville District. During the fall of 1981 full scale excavations were conducted at this stratified late Middle Archaic through middle Late Archaic site (ca. 4,500 - 2,700 B.C.). The lithic procurement stone working technology, ethnobotanical profiles, site geology, soils, and intrasite organization were investigated. Information has been combined with similar components in the Tennessee-Tombigbee area to generate a settlement pattern model of the Middle and Late Archaic. (11/8, 11:00 AM)

Anderson, David G. (Garrow & Associates, Inc.) STABILITY AND CHANGE IN CHIEFDOM-LEVEL SOCIETIES: AN EXAMINATION OF MISSISSIPPIAN POLITICAL EVOLUTION ON THE SOUTH ATLANTIC SLOPE.

This paper examines factors shaping the evolutionary trajectories of agricultural, chiefdom-level societies. Organizational structures in chiefly societies, it is argued, typically cycle through patterns of emergence, expansion, collapse, and eventual reconstitution. Factors promoting stability and change in chiefly societies, that help to explain this cycling behavior, include: the strength of ideologies sanctifying chiefly authority; the effectiveness of societal mechanisms for dealing with matters of chiefly succession, population growth, territorial maintenance or expansion, and/or the incorporation of outsiders; the ability of chiefly organizational hierarchies to accommodate stress brought about by social and/or ecological perturbations, such as warfare, crop failures, exchange network collapses, or increasing pressure on subsistence resources; the degree to which the chiefly elite maintains control over access to non-utilitarian "luxury" or status-marking goods; the position of individual polities in elite goods exchange networks; and the impact of developments in other societies, both those in neighboring areas and over the surrounding region. The effectiveness of these and other explanations is evaluated using archaeological data from the Southeastern Atlantic Slope of the United States, where Mississippian chiefdom-level societies existed from roughly A.D. 1000 to 1600. The focus of the analysis will be occupations within one drainage, the Savannah River. Specifically, it is argued that Mississippian political evolution within the drainage, including its apparent abandonment in the mid-to-late fifteenth century, reflects a combination of many or all of these factors. (11/7, 4:00 PM)

Bastian, Beverly E. (see Martin, T. J.)

Beckerman, Ira Carl THE GREATER YADKIN RIVER ARCHAEOLOGICAL SURVEY PROJECT: SETTLEMENT PATTERNS, SETTLEMENT SYSTEMS.

A 1982 survey of the North Carolina Piedmont in western Forsyth County produced 113 sites in areas totaling 4 km<sup>2</sup>. Most collected artifacts represented a non-indigenous lithic technology of felsitic raw material coming from the Carolina Slate Belt. The special properties of felsite — rapid hydration and highly variable surface expression — allowed most of the collected artifacts to be phased against a series of diagnostic projectile points collected from the area. The site settlement pattern confirmed the typical Piedmont situation: heavily revisited occupations in every acceptable topographic location, with little apparent variation from site to site.

A predictive settlement model, based on central place optimal foraging theory and a reconstructed paleoenvironment, explains variation in settlement patterning that could not be achieved by more traditional regression-derived models. Site function is defined as the presence of longer or shorter stay camps, with greater or lesser degree of revisitation. Empirical measures of this pattern, based on the Shannon-Weiner diversity measure of raw material and lithic types and component size, was compared against the model's expectations of land use for different seasons and variable years over an extended period of time. A fit between the model and Middle Archaic settlement pattern suggests that optimal location in the use of available plant food resources is the overriding factor in site placement. Increasing the importance of disturbed habitat species in the model may lead to better fits between the model and data for the Late Archaic and Woodland Periods. (11/7, 10:20 AM)

Bennett, W. J., Jr. (Archeological Assessments, Inc.) and Lawson M. Smith (Waterways Experiment Station) THE RED RIVER ARCHEOLOGICAL PROJECT, REMOTE SENSING AND SETTLEMENT PATTERN ANALYSIS.

The Red River Archeological Project is a long term effort to locate and to interpret the way(s) in which various human groups have occupied and utilized approximately 250 square miles of the Red River Valley in Texas and Oklahoma. Project results to date include the geomorphic mapping of over 100,000 acres of floodplain, the development of a testable hypothesis regarding Woodland and Mississippian settlement strategies, and the identification of anthropogenic alterations of the landscape which are not discernable in the visual spectrum. This presentation discusses the construction and elaboration of a settlement pattern model based on a detailed geomorphological analysis of the floodplain and the results achieved using advanced remote sensing techniques and instruments (TMS and TIMS) to discern and map both floodplain features and archeological sites. (11/7, 11:20 AM)

Bense, Judith A. (U West Florida) THE CITY ARCHAEOLOGICAL ORDINANCE AND ARCHAEOLOGICAL MANAGEMENT PROGRAM IN PENSACOLA, FLORIDA.

Pensacola now has a city archaeological ordinance with an implementation review process similar to the federal "Section 106" for all city-owned property. The process of development of this ordinance will be presented in this paper. In order to deal with archaeological deposits on private property, a different strategy has been devised that utilizes the resource base of the community: local archaeology support group, students at the local college and university, and funding from the private and governmental sector. Through this means, the city of Pensacola is being surveyed to locate and evaluate the archaeological deposits which will form the basis for the development of an "Archaeological Resource Management Plan" which will be prepared by archaeologists, historic preservationists and city staff. In the interim, when significant archaeological deposits on private property are threatened by development, they are approached with an "unsolicited" proposal to investigate the situation. This program has been successful and received well in the business community. (11/7, 8:40 AM)

Bianchi, Thomas H. (see Mainfort, R. C.)

Blanton, Dennis B. (Garrow & Associates, Inc.) and Frankie Snow (S Georgia College) PALEO-INDIAN AND EARLY ARCHAIC LITHIC ASSEMBLAGE COMPOSITION IN SOUTH GEORGIA: EVIDENCE FROM THE FERONIA LOCALITY.

The Feronia Locality in south-central Georgia is comprised of a cluster of sites yielding rich assemblages of Paleo-Indian and Early Archaic lithic artifacts. Early prehistoric components are inadequately reported for this area, and this material is reported to partially alleviate the void in the record. The assemblages from constituent sites at this locality are described in terms of assemblage diversity, patterns of curation and maintenance, and lithic raw material procurement and use. A regional perspective to this presentation is afforded through comparison with better known, contemporary sites reported in Florida, and the Piedmont of Georgia and the Carolinas. Also discussed is the feasibility of distinguishing different components in surface collections based on the degree of chert weathering. (11/7, 8:00 AM)



Bowen, Jonathan E. (Ohio State U) LATE WOODLAND SETTLEMENT PATTERNS IN THE LOWER SCIOTO VALLEY.

The lower Scioto River flows across the till plains of southcentral Ohio before entering the unglaciated plateau on its course toward the Ohio River on the Kentucky border. While Late Woodland settlements occur both on terraces and bluff edges in the till plain, they are restricted to terraces in the unglaciated plateau. This may reflect the non-arability of bluff-top areas in the unglaciated plateau. (11/6, 10:20 AM)

Bowen, Jonathan E. (Ohio State U) EXCAVATIONS AT AN ARCHAIC BASE CAMP IN SOUTHERN OHIO.

Excavations have just been completed at 33SC17, an Archaic warm-weather base camp on the Ohio River near Portsmouth, Ohio. The tool assemblage includes Merom and McWhinny Heavy Stemmed points, grooved axes, bone needles and awls, pipestone tubular pipes, and antler atlatl hooks. The approximately 60 x 30 meter site, which is located at the mouth of a major hollow, contains a rich midden over 1 meter in depth. Faunal and floral remains are abundant, with hickory nut, walnut, deer, raccoon, fish, and mussels predominating. (11/7, 8:20 AM)

Boyd, C. Clifford (Radford U) RECENT INVESTIGATIONS OF THE PLUM GROVE SITE (40WG17), WASHINGTON COUNTY, TENNESSEE.

Recent investigations of the Plum Grove site, a Late Prehistoric/Protohistoric period site in upper East Tennessee, include the radiocarbon dating of two large Pisgah phase pit features (excavated in 1979) and the analysis of their associated lithic and ceramic artifacts. In addition, salvage excavations in the spring of 1986 identified several additional Pisgah phase features and a burned Protohistoric wattle and daub structure, which has been radiocarbon dated. The radiocarbon dates and feature and artifact analyses provide important new information on the prehistoric chronology of upper East Tennessee. (11/7, 1:20 PM)

Boyd, C. Clifford (see Schroedl, G. F.)

Brain, Jeffrey P. (Peabody Museum, Harvard U) THE TUNICA THROUGH HISTORY AS IDENTIFIED ARCHAEOLOGICALLY.

The study of culture change among the Tunica is greatly enhanced by the fact that a long-term project has established a number of historical and archaeological datums spanning the entire historic period from the mid-sixteenth century to the modern era. The critical eighteenth century is especially well documented and the conjunction of historical, ethnohistorical, and archaeological resources is unusually rewarding. It is found that the Tunica response to European contact followed familiar paths of "acculturation," but that some processes and decisions were distinctive. (11/6, 2:20 PM)

Brown, Ian W. (Peabody Museum, Harvard U) FRIEND OR FOE? THE CALUMET CEREMONY IN THE LOWER MISSISSIPPI VALLEY AND ITS ARCHAEOLOGICAL MANIFESTATION.

The calumet ceremony among the Lower Mississippi Valley Indians was but one part of a complex meeting ritual, a ritual that extended far back into prehistory. The smoking of the calumet itself, however, appears to have been a relatively late addition, probably beginning during the seventeenth century. In this paper I will examine the functions and significance of the calumet among Mississippi Valley groups and investigate more closely the impact that French explorers and missionaries had on its usage during the eighteenth century. Archaeological evidence for the calumet ceremony is also discussed, and some suggestions and directions for further research are presented. (11/6, 2:40 PM)

Byrd, Kathlene (Louisiana Division of Archaeology) THE FEDERAL ARCHAEOLOGY PROGRAM IN LOUISIANA: ITS ACCOMPLISHMENTS AND FUTURE POSSIBILITIES.

The Federal Archaeology Program has had a major impact on the archaeology of Louisiana. The Division of Archaeology is involved in the administration of part of the Federal Archaeology Program at the state level. Initially most of the division's efforts were concentrated in the National Historic Preservation Act Section 106 compliance area. Over the last 20 years, major contributions to the knowledge of Louisiana archaeology have occurred as a result of this program. Several of these projects are reviewed. More recently the office's emphasis has shifted somewhat, due in part to the decrease in large-scale federal projects in Louisiana and in part to the recognition that major impacts on archaeological resources occur outside the 106 review. The division increasingly relies on Historic Preservation Fund grants to locate archaeological sites and to test these sites to determine National Register significance. Examples of these grants are discussed. Planning and site preservation efforts are the directions of the future. The planning efforts identify current levels of knowledge of the state's archaeology and thereby set long-range research goals. Further, it identifies landuse managers who have direct impact on site preservation and identifies methods which can be used to protect significant sites for future research. The last 20 years of the Federal Archaeology Program has made considerable strides forward in knowledge of the archaeology of Louisiana. The next 20 years could be equally productive. (11/6, 9:40 AM)

Cannon, Debora F. (see Quitmyer, I. R.)

Cannon, Kenneth P. (U Tennessee, Knoxville) NATURAL AND HUMAN IMPACTS ON ARCHAEOLOGICAL RESOURCES IN THE WATTS BAR RESERVOIR, EAST TENNESSEE.

Documentation of potential and incurred archaeological site modification is an imperative primary step in the management of cultural resources. From the Upper Tennessee River Valley (Watts Bar Reservoir), site destruction, attributed to human activities, was documented by the earliest researchers in the region. However, during the past 44 years since impoundment, fluvial processes, in addition to increased human activities, have become a major source of impact upon these resources. As a result of these natural and human activities, the vast majority of sites within the Reservoir have been subjected to some degree of modification. Through the use of

quantitative and qualitative data details of the destructive forces at work in the Reservoir have been documented. (11/7, 8:00 AM)

Cantley, Garry J. (Arizona State U) POLLEN ANALYSIS AND THE ARCHAEOLOGICAL RECORD.

In keeping with an established trend in archaeology, there is good reason to expect archaeologists to increasingly incorporate the aid of specialists in their projects. The process of successfully articulating the contributions of specialists with the project's goals, of course, necessitates that the archaeologist have some basic understanding of what the specialists do. This paper is an effort to better inform archaeologists of the potential contributions of pollen analysis. It outlines the assumptions its practitioners make and the issues peculiar to pollen analysis still under debate. It further provides information that archaeologists may find useful while judging the conclusions of pollen studies. (11/8, 10:20 AM)

Carr, Christopher (Arizona State U) NEW RADIOGRAPHIC METHODS FOR STUDYING CERAMICS.

A suite of inexpensive, nondestructive, available radiographic procedures exist for studying ceramic vessels for the density and size distribution of their temper particles, compositional differences in temper materials, coiling and building procedures, and fracture use patterns. Although Xeroradiography is useful for examining shell and limestone tempers, it is less appropriate for igneous, metamorphic, and sand tempers than are medical mammography procedures or industrial techniques. Radiographic information can be used to identify vessel technology and function and to discriminate sherds from "analytically individual" vessels. Examples are provided with Woodland vessels. (11/7, 10:40 AM)

Carstens, Kenneth C. (Murray State U) IN PURSUIT OF FORT JEFFERSON: A SUMMARY OF INVESTIGATIONS, 1980-1986.

Investigations pursuing the discovery of the location of George Rogers Clark's 1780-1781 fort and community at the mouth of the Ohio River have been occurring since 1980. This paper contains a description and discussion of the various methods used and results obtained thus far in the search for this historically-significant site complex. (11/6, 8:40 AM)

Carstens, Kenneth C. (see Potter, W. L.)

Chapman, Jefferson (Frank H. McClung Museum, U Tennessee) THE FEDERAL ARCHAEOLOGY PROGRAM IN TENNESSEE, 1966-1986: AN ARCHAEOLOGICAL SECOND COMING.

The past 20 years have seen a resurgence in federally sponsored archaeological activities in Tennessee. Construction impacts of reservoirs, energy plants, roads, municipal improvements, and urban expansion have yielded a plethora of projects mandated by the National Historic Preservation Act of 1966. Building on the techniques and data base of the earlier federally funded CWA/WPA era, a new

generation of archaeologists have added greatly to our knowledge of the past and to the techniques by which one might extract that knowledge. This paper reviews the scopes of many of these projects, their foci of research, their impacts on academic institutions and private enterprises, and their contributions to the body of archaeological knowledge. (11/6, 11:20 AM)

Charles, Mona C. (Nickens and Associates) CULTURAL VERSUS ARBITRARY STRATIGRAPHIC UNITS.

Cultural versus arbitrary stratigraphic units, which is more appropriate? The excavation of archaeological sites usually employs one of two field techniques. The use of arbitrary units (i.e., 0-5 cm) has long been employed by archaeologists in North America in general, and the southeast in specific. However, excavation of natural cultural units is on the rise, especially within the context of historic archaeology. It is my intention to explore the use and abuse of each technique and to draw some conclusions about the appropriateness of each within the archaeological profession. (11/8, 9:20 AM)

Church, Tammy A. (Appalachian State U) A METRICAL STUDY OF SAVANNAH RIVER POINTS FROM THE NORTH CAROLINA MILLER COLLECTION.

The purpose of this paper is to discuss the use of metrical analysis in a lithic study of Savannah River projectile points from the Southern Appalachian mountains around northwestern North Carolina. Measurements made were of length, shoulder width, stem width and weight. A summary and critique of metrical techniques used in this paper are discussed. It was found that northwestern North Carolina Savannah River points are on the smaller end of the scale established using Piedmont North Carolina points as reported in Coe (1964). Several suggestions are made for improvements in the documentation of methods as well as topics for future study. (11/7, 10:40 AM)

Clay, R. Berle (U Kentucky) TWENTY YEARS OF FEDERAL ARCHAEOLOGY IN KENTUCKY.

The most recent involvement of the Federal Government in Kentucky Archaeology, since 1966, has seen the most consistent and sustained growth in our knowledge of archaeological sites in the state. During this time more money has been spent on archaeology than has been spent during the entire history of archaeology. This is reflected in a greatly expanded state survey file, well collected and documented new data sets, and a substantial body of reports of archaeological research. While there have been major advances in our understanding of certain culture periods and archaeological cultures, one would hope for more given the level of Federal involvement. In Kentucky, as elsewhere, the problems in getting more for one's money lie not with the Federal programs, but with the larger profession of archaeology.

The major advances in state archaeology are discussed in this paper together with the problems involved in "doing archaeology". Suggestions are offered as we move into the third decade of the National Historic Preservation Act building upon the experiences of the past two. (11/6, 9:20 AM)

Cobb, Charles R. (Southern Illinois U) and Michael S. Nassaney (U Massachusetts, Amherst) RE-NEWED PERSPECTIVES ON LATE WOODLAND REGIONAL VARIATION IN THE SOUTHEAST: PATTERNS AND PROCESSES.

The Late Woodland period in the prehistoric Southeastern United States represents an era of strongly developed regionalization. The cultural and social diversity has often been attributed to variable adaptations to local ecological conditions. This regionalism is difficult to reconcile with regard to the more homogeneous preceding Middle Woodland or succeeding Mississippi periods. The markedly different, and apparently unstable, patterns of social integration must be understood as organizing responses to the social, as well as physical, environment. Thus, a more explicit consideration of dynamic social models provides a renewed perspective on processes such as subsistence intensification and the promotion of horticulture, or the emergence of hierarchical sociopolitical systems in the subsequent Mississippi period. (11/6, 8:00 AM)

Cobb, Charles R. (see Webb, P. A.)

Cole, Gloria G. (Alabama Historical Commission) THE MURPHY HILL SITE: A RE-EVALUATION OF THE COPENA CONCEPT.

The Murphy Hill site, on the south bank of the Tennessee River in the Guntersville Basin, is the first Copena burial mound site excavated since WPA salvage excavations in the 1930s and 1940s.

Not only excavation techniques, but also the archaeological theory of culture have changed since Copena was first defined as a cultural concept. The development of mortuary analytical techniques and of structural analysis in general now permit interpretations of mortuary data that could not be made under the old natural history approach of the 1930s.

Murphy Hill Mound A is a single component burial mound and represents a sequence of Copena mortuary events from approximately 100 B.C. to A.D. 200. The mound was intact except for surface erosion and shows no evidence of non-Copena intrusion. (11/8, 11:20 AM)

Collis, Kelly L. (Wake Forest U) MIDDLE WOODLAND MARINE SHELL BEADS FROM THE DONNAHA SITE, NORTH CAROLINA.

The Donnaha site (1100-1500 AD) is a Middle Woodland site on the Yadkin River north of Winston Salem. Large quantities of river mussel aided preservation of bone. One woman aged 30-40 years was buried with a shell gorget. Ten of forty-eight burials contained shell beads. Marginella, Olive shell, disc, subrectangular and tubular beads from six adult and one child burial, probably all male, have been analyzed in this paper. Bead type, bore size, diameter, length and cultural use have been recorded from a sample of 1500 marginella, four disc beads and four tubular beads from the burials. The burials of definite male skeletons with beads were all between the ages of 18 and 35. Comparisons are made with the data from the Middle Woodland Mulberry Mound site in South Carolina and modern Marginella populations. (11/8, 8:00 AM)

Colquhoun, Donald J. (see Goodyear, A. C.)

Crothers, George M. (U Tennessee) A GOURD CONTAINER FROM A DRY CAVE IN CENTRAL TENNESSEE.

Big Bone Cave, Van Buren County, Tennessee was extensively explored and possibly mined for gypsum between 3000 and 1500 years B.P. Among the perishable remains documented in the cave is a complete gourd container. This container, similar to an artifact documented from the Mammoth Cave system in Kentucky and used in the procurement of gypsum, was found to contain sunflower achenes, presumably the residue from food preparation and consumption. This discovery demonstrates that such artifacts probably had multiple uses within the cave context, but their primary use still seems to be in the procurement of gypsum. The container and analysis of its contents are described and discussed in relationship to other perishable remains and the nature of prehistoric activity in the cave. (11/7, 1:20 PM)

Custer, Jay F. (Center for Archaeological Research, U Delaware) and Keith R. Doms (Center for Archaeological Research, U Delaware) ANALYSIS OF OYSTER SHELL MORPHOLOGY AND GROWTH RINGS: IMPLICATIONS FOR SITE FORMATION PROCESS.

Techniques have been developed to analyze oyster shell morphology and growth rings on hinges to determine collecting environments, season-of-death, and opening techniques. The presence, or absence, of consistent collecting environments and seasons of death in oyster shells from pit features and levels in middens can reveal episodes of deposition and disturbances. Examples from Woodland pit features in Delaware show highly consistent collecting environments and seasons-of-death indicative of one or two episodes of deposition. An Early Woodland example from the Virginia Coastal Plain shows a very wide variety of seasons-of-death and collecting environments indicating multiple depositional events or post-depositional disturbances and poor contexts for the samples. (11/6, 2:00 PM)

Davis, C. (see Alexander, L. S.)

Davis, Hester A. (Arkansas Archeological Survey) DOUBLE THE WORK, DOUBLE THE TREASURE: FEDERAL ARCHEOLOGY IN ARKANSAS, 1966-1986.

The reservoir salvage program was winding to a close in Arkansas in 1966. The National Park Service, first under John Corbett and then Rex Wilson, did not slow down its involvement in Arkansas archeology just because all the reservoirs were built. Between 1966 and 1972, two major overviews were funded, one of the Lower Mississippi Valley, and one of the Red River Valley, and the first contract was funded to investigate non-reservoir site destruction due to federal projects. This look at SCS-sponsored land leveling in Arkansas and Missouri lead directly to the Archeological and Historical Resources Protection Act of 1974. Since that time, archeology under contract with federal agencies or as a result of federal law, has been a major source of field archeology in Arkansas, and has resulted in some of the major publications which have been published on the prehistoric and historic archeology of the state. (11/6, 8:20 AM)

Davis, R. P. Stephen, Jr. (see Ward, H. T.)

Decker, Deena S. (see Newsom, L. A.)

Dickinson, Martin F. (Water and Air Research, Inc.) A PRELIMINARY ANALYSIS OF SETTLEMENTS PATTERNS ON FORT GEORGE ISLAND.

Fort George Island, Florida is a relict barrier island at the mouth of the St. Johns River. Archaeological studies have provided evidence of occupation as early as the Late Archaic period. Other primary occupations occurred during the late St. Johns periods, the Spanish mission era, and the antebellum period. Recent testing of sites on the island has led to a preliminary analysis of prehistoric settlement patterns.

The eastern side of the island consists of comparatively high bluffs fronting on the Fort George River. The southern and western portions of the island are lower, level areas surrounded by tidal marshes. Testing indicates that the sites on the east are earlier occupations dating to the Late Archaic, Deptford and early St. Johns periods. The sites on the west appear to be later St. Johns and mission period occupations.

Based on the evidence from the site testing, there appears to be a shift in settlement pattern as a result of a change in subsistence emphasis, possibly due to an increased use of cultigens. The western portion of the island is better suited for horticulture than the eastern portion. In addition, the western side is less exposed to either the elements or human observation. These factors may have influenced site selection for increasingly sedentary occupations. (11/8, 8:00 AM)

Doms, Keith R. (see Custer, J. F.)

Dowd, John T. (Middle Cumberland Archaeological Society) STONE BOX GRAVES: ABNORMALITIES AND PATTERNS.

Stone box graves are common to Middle Tennessee, especially in the Nashville area. Over the last hundred or so years literally thousands of these graves have been destroyed by urban expansion and relic hunting. Only a few hundred of these thousands have been scientifically excavated. A recently passed State cemetery law now protects these graves and allows for their removal only when necessary. While much attention has been given to the elaborate grave goods little has been said of the box itself or of the similar burial layout patterns that are often exhibited. This slide presentation will show the make-up of a normal stone box grave and some abnormalities, some of which have not been previously reported. (11/6, 4:00 PM)

Dunnell, Robert C. (U Washington) and J. K. Feathers (U Washington) LATER WOODLAND MANIFESTATIONS OF THE MALDEN PLAIN, SOUTHEAST MISSOURI.

As Phillips (1970:913) laments, only a single phase, the Dunklin phase, represents the whole of the Woodland period on the Malden Plain in Southeast Missouri. A few marker attributes are sometimes taken to signal early and late portions of the sequence (Morse and Morse 1983). Recent investigations of ceramic technology and

TL dating of the ubiquitous Barnes pottery associated with the phase promise to make finer divisions possible. At the present level of resolution, it appears that the earlier part of the Dunklin phase is organized similarly to the Late Archaic whereas the later part resembles the early Mississippian Big Lake phase in terms of site size and distribution. The Woodland/Mississippian boundary may be founded on little more than a change in ceramic technology in this area. (11/6, 9:40 AM)

Dye, David H. (Memphis State U), Charles Hudson (U Georgia), and Dan F. Morse (Arkansas State U) INITIAL EUROPEAN CONTACT IN THE MID-SOUTH: THE DE SOTO ENTRADA (1540-1543) AND INITIAL COLONIAL EXPLORATIONS (1673-1700).

Observations stemming from the first European encounters with Mississippian peoples, coupled with contact period archaeology, provide important sources of anthropological information for archaeologists, ethnohistorians, and cultural anthropologists. These early European accounts, although fragmentary and biased, contain significant data for model building. The initial, and perhaps most devastating, impact of Europeans upon native Americans begins with the sixteenth century Spanish expeditions. A separate period of contact was initiated by the French and English colonists of the Gulf and Atlantic Coasts in the late 17th century. The focus of this paper is the anthropological potential of contact period archaeology for both of these periods of European contact. (11/6, 1:20 PM)

Dye, David H. (Memphis State U) and David R. Stevenson (Memphis State U) DENTAL TRAITS AND KINSHIP: AN EXAMPLE FROM THE LATE MISSISSIPPIAN CUMBERLAND CULTURE.

A prevalence rate for deciduous double teeth, a familial dental trait, has been established for the Late Mississippian skeletal population at the Averbuch site in central Tennessee. This prevalence rate is ten times higher than average for North American and European children, but is comparable for Japanese children. In this paper we outline recent research that tests whether the clustering of this trait is specific to the Averbuch site or represents a regional pattern. This hypothesis was tested by observing dentitions from the Late Mississippian Arnold, Averbuch, Ganier, Guices Creek, and West sites. The data suggest that the trait is regional and may be related to chiefdom mating patterns. (11/7, 1:00 PM)

Eubanks, Mary (Vanderbilt U) THE ORIGIN OF MAIZE: A NEW THEORY.

Maize, Zea mays, the staple grain that was the cornerstone of prehistoric agriculture in the Americas, is the only major world food crop for which there is no documented wild ancestor. Although numerous theories have been proposed, the different pieces of the puzzle have not fit together into a testable theoretical framework that proves the origin of this unique and invaluable cultigen.

The two most controversial theories that have been widely debated in the published literature, the Teosinte Theory and the Tripartite Theory, will be reviewed along with the distinguishing botanical characteristics of maize and its two closest wild relatives, teosinte and Tripsacum. With this background, the results of hybridization experiments crossing diploid perennial teosinte, Zea diploperennis, a wild grass discovered in 1979 on the threshold of extinction in Jalisco, Mexico, with Tripsacum



will be presented. The findings from the genetic research will be interpreted in light of their interrelationship with the evidence from the archaeological record, and a new theory for the origin and evolution of maize will be proposed. (11/7, 1:40 PM)

Falk, Carl R. SITE FORMATION PROCESSES AND THE ANALYSIS OF VERTEBRATE ASSEMBLAGES RECOVERED FROM LATE PREHISTORIC VILLAGE SITES IN NORTH CENTRAL, SOUTH DAKOTA.

Consistent application of waterscreen techniques at two Late Prehistoric Plains Village Tradition sites located in the Missouri Valley of north-central South Dakota resulted in the recovery of over 70,000 identifiable vertebrate specimens, the majority of which were sorted from fine-screen residues from large subsurface features (undercut, straight-sided, and basin pits). This paper presents a taphonomic analysis of the two assemblages, with particular attention to small mammals and birds which are well represented in the samples but not generally considered to have played a role in village subsistence economy. (11/6, 2:20 PM)

Feathers, J. K. (see Dunnell, R. C.)

Fielder, George F. (Tennessee Div. of Archaeology) MISSISSIPPIAN SITES IN MIDDLE TENNESSEE: A REVIEW OF WHAT'S LEFT.

A 1986 update on the current status of the "well-known" and "not-so-well-known" Mississippian sites in Middle Tennessee. Sites are separated into protected, no current danger, endangered, mostly lost, and lost categories. Future plans for the sites owned by the State of Tennessee are presented. (11/6, 3:20 PM)

Fogarty, Mary Ellen (U Tennessee) FEATURE FUNCTION AND FAUNAL FREQUENCIES.

The faunal content of two pit features from the Middle Archaic Ervin Site shell midden of Middle Tennessee are analyzed from a taphonomic perspective in an effort to infer feature function. It is suggested that differing frequencies in the occurrence and type of element, breakage patterns, cut marks, carnivore gnawing, stages of weathering, and scatological characteristics indicate differences in feature function and duration of use. Additionally, a meat utility index developed for the white-tailed deer is presented and its usefulness in discerning ravaged vs undisturbed cultural deposits of bones is illustrated. It is concluded that one pit is the result of a few discrete well curated episodes of use, while the second is the result of less maintained more general use for an extended period of time. (11/6, 2:40 PM)

Ford, Janet (U Mississippi) THE LITTLE SPRING CREEK MOUND: A PRELIMINARY REPORT.

The summer field course of the University of Mississippi focused on the Little Spring Creek mound (22LA636). The site, located in northern Lafayette County, Mississippi is an apparent burial mound which is threatened by severe damage. The site is very small, measuring 27 x 57 feet; it is only six feet high. A ten-foot wide north-south trench excavated slightly to the east of the mound center revealed that it is the

result of single-unit construction. An extremely early date for the mound is suggested by recovery of a shattered, but complete Alexander Pinched vessel from the southeastern mound mantle. (11/8, 9:00 AM)

Gatus, Thomas W. (Association for Anthropological Research, Inc.) KENTUCKY'S PREHISTORIC INDIAN TRADITION.

This presentation was produced for the Kentucky Middle School System. It is geared towards children in grades 5 through 9. Review by various educators and anthropologists also suggested that it could be appreciated through high school. The program consists of a single carousel of 79 slides accompanied with a narrated cassette tape containing audio cues. The message is explicitly anthropological in the larger sense. Material culture is deemphasized in favor of portraying daily social, political, economic, and ceremonial events during the four major prehistoric cultural traditions. Ideas and concepts are transmitted to the audience primarily through 51 original water color paintings. Other graphics, such as maps and tables, are integrated as well as photographs of various tools (e.g., Montgomery Incised pottery, Paleo-Indian projectile points and groundstone implements). (11/8, 10:00 AM)

Goodyear, Albert C. (S. C. Institute of Archaeology & Anthropology), Ruth Y. Wetmore (S. C. Institute of Archaeology & Anthropology) and Donald J. Colquhoun (U S Carolina) ARCHAIC PERIOD OCCUPATIONS AT THE NIPPER CREEK SITE, 38RD18, RICHLAND COUNTY, SOUTH CAROLINA.

The Nipper Creek site, located near the fall line in the Broad River Valley of South Carolina, has yielded unusual archaeological and geological information. The site is situated on a hillside in apparent colluvial sands which have slowly buried prehistoric occupation surfaces up to a meter in depth over the past 11,000 years. Test excavations and surface collections have produced diagnostic artifacts from nearly every major Archaic phase known for this region of the South Atlantic Slope. A fluted point base has also been found. Charred hickory shells have been recovered from excavation level which are amenable to C14 dating. Five C14 dates have been obtained on 10cm level charcoal which are prehistoric and temporally in order but consistently too late. Sedimentological analysis has indicated an artificial increase in clay and silt content associated with human occupation and variability in sedimentation rates that may be correlated to major vegetation changes known for the Holocene as documented at nearby White Pond. Because of its geographic location near the fall line, and its high diversity and density of Archaic lithic tools, many of which are made of lithic raw materials exotic to this region, the Nipper Creek site is suggested to have functioned as a frequently revisited habitation camp from Dalton to Savannah River Archaic times. (11/7, 9:40 AM)

Grimes, Kimberly M. (U South Carolina) DIETARY CHOICES AT THE MULBERRY MOUND SITE.

The Mulberry Mound Site is located on the floodplain of the Middle Wateree River Valley, Kershaw County, South Carolina. In the 1985 summer field season, ethnobotanical samples were collected from the late prehistoric occupation of the site: from the two mounds and from a structure located in the village area. The area where the structure was discovered, was investigated due to a high concentration of sheets of mica recently exposed by plowing. An analysis of the ethnobotanical

remains within the context of the structure and a description of the mica will be presented. (11/7, 2:00 PM)

Hall, Charles L. (U Tennessee) BUGTUSSE ROCKSHELTER: TEST EXCAVATIONS AT A DRY ARCHAEOLOGICAL SITE.

Recently an unusual rockshelter was discovered by relic collectors in Macon County, Tennessee. The most significant aspect of this shelter was the remarkable preservation of materials which are normally not preserved archaeologically, including unprocessed plant remains, textiles, human paleofeces, and animal tissues (hair and hides). Test excavations, conducted during the summer of 1984, indicate that while damage to the site has been considerable, intact aboriginal deposits are present. Analysis of the recovered material suggests that the primary prehistoric utilization occurred during the late Middle Woodland or early Late Woodland period. Research to date will be reviewed with an emphasis on the perishable materials. (11/8, 9:20 AM)

Hally, David J. (U Georgia) THE MISSISSIPPI PERIOD IN THE VALLEY AND RIDGE SECTION OF NORTHWEST GEORGIA.

Based on an analysis of extant pottery collections, a sequence of Mississippian phases is outlined for the Valley and Ridge section of northwest Georgia. The ceramic complexes of all phases are characterized by a combination of Tennessee Valley Mississippian (Hiwassee Island, Dallas) ceramic features and north Georgia Mississippian (Etowah, Savannah, Lamar) ceramic features. Sites tend to occur in spatially distinct clusters along the major rivers in the region, and these clusters tend to correspond to the ceramically defined phases. The implications of these findings are discussed. (11/7, 3:20 PM)

Hargrave, Michael L. (see Webb, P. A.)

Hatch, James W. (Pennsylvania State U) THE SOURCING AND DATING OF HOPEWELL OBSIDIAN: IMPLICATIONS FOR THE NATURE AND CHRONOLOGY OF OBSIDIAN USE IN THE MIDWEST.

The recent dating of obsidian artifacts from five midwestern archaeological localities — Hopewell Site, Ohio (Mounds 11 and 25); Seip Site, Ohio (Mound 1); Mound City, Ohio (Mound 13); and the Naples Site, Illinois — provides us with a much expanded chronometric basis for determining 1) the history of occupation and growth at these sites, 2) the timing of obsidian trade from sources in the Rocky Mountains, and 3) the extent of curatorial activities associated with obsidian artifacts and debitage. In addition, the results of the trace and bulk constituent analyses of obsidian from these same sites calls for a slight expansion of the number and location of Rocky Mountain sources over that proposed by Griffin, Gordus and Wright (1969). Trace elemental results also suggest the possibility of our recognizing discrete obsidian shipments and the monitoring of their circulation in intra- and inter-site exchanges.

This paper will discuss the timing and nature of obsidian trade, as well as selected aspects of obsidian tool manufacture and discard. Comparisons will be drawn between the trade of obsidian and trade in other types of exotica as part of the Hopewell Interaction Sphere in the Midwest and Southeast. (11/8, 9:40 AM)

Hill, M. Cassandra (U Massachusetts) A STUDY IN ADAPTATION: THE DYNAMIC INTERPLAY OF CULTURE, BIOLOGY, AND ENVIRONMENT FOR A LATE WOODLAND POPULATION IN ALABAMA.

The events prior to the appearance of the cultural period known as Mississippian in the eastern United States are of critical importance to the understanding of why stratified, non-egalitarian socio-cultural systems develop. Although a complete understanding will probably never be attained, the discussion of these events will at the very least aid in the elucidation of a critical question to social theorists.

This paper explores the dynamic interplay of biology, culture and environment as reflected in the skeletal remains of a sample of individuals representative of the Late Woodland period in west-central Alabama. Skeletal populations are valuable for inference about past behavior because they represent the biological "memory" of particular episodes or events experienced during an individual's lifetime. Through an understanding of the causes and consequences of certain pathological conditions, we are able to evaluate trends in the processes of human adaptation, and ultimately the impact of particular stressors from the biological and cultural environments which lead individuals and populations to make critical choices. (11/6, 1:20 PM)

Hoffman, Rob (U Tennessee) THE EASTERN WOODRAT (NEOTOMA FLORIDANA) AS A TAPHONOMIC FACTOR IN ROCKSHELTER SITES.

Zooarcheological analyses from assemblages in a number of rockshelters in the Big South Fork River area of the Cumberland Plateau indicate a substantial amount of disturbance from local nesting woodrats. To explore the nature of these disturbances, skeletons from several animal taxa were experimentally introduced into an active woodrat nesting site in a rockshelter near Rugby, Tennessee. After six months, patterns in bone dislocation and other forms of modification were assessed. This analysis confirms that woodrats can affect significant changes in the character of an archeofaunal assemblage through their compulsive acquisitive tendencies. The presence of woodrats in enclosed sites may result in a complex and confusing array of conditions that zooarcheologists will want to recognize before applying basic quantitative techniques to a related faunal assemblage. (11/6, 4:00 PM)

Hooge, Paul E. (Licking County Archaeology and Landmarks Society) THE HISTORY OF OHIO ARCHAEOLOGY - THE PERSONALITIES. HUMAN VALUES AND THE FUTURE OF OHIO'S PREHISTORIC EARTHWORKS. ETHICS IN ARCHAEOLOGY: CONFLICTS IN COLLECTING.

Archaeology in Ohio has many problems as is the case in many other states. The three videos being presented address several of these problems and provide some historical background for them. The programs presented by LCALS were produced in part with funding from the Ohio Arts Council/Ohio Humanities Council Joint Program for the Built Environment.

All three programs feature interviews with Dr. James B. Griffin, Dr. David Brose, Dr. Olaf Prufer, Dr. Frederick Starr and other individuals important to archaeology in Ohio.

Program #1 - THE HISTORY OF OHIO ARCHAEOLOGY - THE PERSONALITIES. This video evaluates the contributions of curators and directors of the Archaeological and Historical Society of Ohio (the Ohio Historical Society) from 1895-1975.

Program #2 - HUMAN VALUES AND THE FUTURE OF OHIO'S PREHISTORIC EARTHWORKS. Each year Ohio loses more of its prehistoric built environment. Video #2 addresses the reasons why Ohioans are not more concerned and what can be done about it.

Program #3 ETHICS IN ARCHAEOLOGY: CONFLICTS IN COLLECTING. The destruction of archaeological sites by collectors and dealers has become a serious problem in many states. Video #3 provides views from both sides of the conflict. (11/8, 10:00 AM)

Horton, Sarah Lawing (Appalachian State U) CLAY CONSTITUENTS OF NORTH CAROLINA POTTERY EXAMINED BY XRD.

This paper reports an analysis fo sherds using XRD by a diffractometer from two North Carolina sites. Focusing on the constituent clays of the sherds the original clays and/or those recrystallized as a result of firing are identified. Shell tempered, fabric and cord impressed sherds are examined from 31ON77, a coastal shell midden site, which began accumulating in 1285+45 BP. Sherds of the Dan River, Pee Dee, Yadkin and Badin series from the Donnaha site (31YD9) in the piedmont are also examined. The major occupation occurred between AD 1000 and 1500. Ceramic manufacturing techniques are compared. (11/7, 1:40 PM)

House, John H. (Southern Illinois U) THE MISSISSIPPIAN SEQUENCE IN THE MENARD LOCALITY, EASTERN ARKANSAS.

James A. Ford perceived the aboriginal mortuary ceramics from the Menard-Hodges site and nearby Wallace site as constituting a single Quapaw cultural assemblage, shown by the association with European trade goods to data as late as the 1686-1721 interval. A recent analysis of vessels in private collections from two additional sites in the locality, Massey and Poor, reveals both parallels with and divergences from the available vessel series from Menard and Wallace. It appears likely that the Menard and Wallace sites vessels represent not a synchronic unit but rather a continuum of occupation, the earlier portion of which is represented at Massey and Poor. Despite the presence of some "Tunican" attributes in the Massey and Poor sites vessel series, the preponderance of shared attributes favors alignment of these components with the Old Town, Kent and Walls phases. No claim is made to have resolved the "Quapaw paradox." (11/7, 10:40 AM)

Hudson, Charles (see Dye, D. H.)

Hunt, Patricia K. (Ohio State U) AN INVESTIGATION OF FABRIC FRAGMENTS RECOVERED FROM A SLAVE CEMETERY IN SOUTH CAROLINA.

Few examples of clothing worn by Afro-American slaves are known to exist. Clothes were either worn out during use, discarded, or buried on the body when an individual died. The purpose of this study is to investigate fabric fragments recovered from

a slave cemetery on the former site of Bayview Plantation in Mt. Pleasant, South Carolina. This cemetery was unmarked, and, therefore, was accidentally discovered in February 1984 during grounding operations for a proposed subdivision when several graves were uncovered. In accordance with South Carolina law, the burials were relocated. Dr. Ted Rathbun, Physical Anthropologist, Department of Anthropology, University of South Carolina and a team of archaeologists, osteology students and others excavated the cemetery in March 1984.

There were approximately 35 burials in this cemetery. The fragments of concern to this study were recovered from Burial D-4b. Burial D-4b was identified as a male of African descent, approximately 49 years of age at death. With this burial a tin-name plate with the initials "J.W." and the date of death "1863" engraved on it was recovered. Microscopic analysis of the fragments were conducted to determine fiber content, fabric and yarn structure. Small sample techniques were utilized for solubility and dye tests to determine the type of dye used on the fabric. The findings were compared with the types of fabrics manufactured on the plantation and purchased for slave clothing as recorded in slave narratives, letters and diaries of former slaves. Inferences about production and consumption of this type of clothing are made from this comparison. (11/7, 1:20 PM)

Hutchinson, Dale L. (see Mitchem, J. M.)

Ison, Cecil R. (U.S. Forest Service) PROVIDING A BETTER UNDERSTANDING OF TERMINAL ARCHAIC SUBSISTENCE: A VIEW FROM COLD OAK SHELTER.

Recent test excavations within the Cold Oak Shelter (15LE50) in eastern Kentucky identified a stratified, multicomponent deposit exhibiting unique preservation qualities. Of special importance is a Terminal Archaic horizon composed primarily of perishable plant remains. Unlike most sites where disproportionate preservation tends to create a skewed sample toward harder shelled nuts, the archaeo-botanical assemblage of Cold Oak provides a clearer picture into the plant resources exploited by the Terminal Archaic peoples. The emergence of horticulture and the role of the various genera of nuts in their subsistence system is discussed. (11/7, 9:20 AM)

Jakes, Kathryn A. (Center for Archaeological Sciences, U Georgia) ANALYTICAL METHODS FOR THE STUDY OF PREHISTORIC TEXTILES.

Analysis of archaeological textiles, particularly fiber identification, description of yarn and fabric structure, and determination of dye and mordant chemistry, provides information by which the technology of textile manufacture and the cultural use of textiles by prehistoric peoples are inferred. The application of certain methods of analyses not only enhances these studies and their implications for the systemic context of textile artifacts, but also increases the information retrievable from prehistoric textiles and expands the possible implications to the biologic and diagenetic contexts as well. In addition, these analytical methods employ very small samples or are non-destructive; one sample may be used for more than one type of analysis. Fiber identification and characterization of fiber condition have been improved by the addition of polarized light, phase contrast, and differential interference contrast to optical microscopy, and by scanning electron microscopy. Fourier transform infrared spectroscopy provides infrared absorbance data of organic and inorganic materials, useful in classifying fibers and characterizing the extent of their

degradation, preservation, or mineralization. Chromatographic methods, particularly high pressure liquid chromatography, combined with ultraviolet, visible, and infrared spectrophotometry yield data on dye chemistry as well as textile condition. Archaeological textiles have both an inorganic and an organic nature. X-ray microanalysis techniques (such as energy dispersive analysis of x-rays, x-ray fluorescence, x-ray diffraction) provide elemental and structural data useful in the study of mordants, of fiber processing procedures, and of the influence of soil and metal in the burial environment. Mineral crystals formed in plant growth can be used in determining the biologic origin of fibers; those crystals formed in mineralization can be used to reveal the progress of diagenesis. Stable carbon and oxygen isotopic analyses of mineralized fibers can reveal the biogenic or abiogenic origins of the mineral components. Isotopic analyses of prehistoric fabrics may reveal information concerning the environmental circumstances of their growth. Recognition of the vast potential of evidence embodied by prehistoric textiles encourages appropriate removal from sites, careful storage in the laboratory or museum, and extensive study using a wide variety of analytical methods. (11/7, 1:00 PM)

Jakes, Kathryn A. (see Sibley, L. R.)

Janini, Charles (see Pacheco, P.)

Jefferies, Richard W. (see Milner, G. R.)

Johnson, Dave (Appalachian State U) SEASONALITY OF RANGIA FROM PATARATA 52, VERACRUZ, MEXICO.

This paper is the result of an analysis of archeological shell, excavated from the Patarata 52 site of Veracruz, Mexico. The sample is from a Limon phase context, Late Classic in date (600-900 AD). The study was to determine season of death as well as age at death of the Rangia bivalve from this provenience. The shell valves were thin sectioned and viewed microscopically, then compared to a modern Rangia control collection, also collected at Veracruz. The analysis resulted in the determination of a February collection and an average age of 4.6 years for the prehistoric Patarata Rangia specimens. (11/7, 2:20 PM)

Johnson, G. Michael (Washington State U) and Timothy A. Kohler (Washington State U) TOWARD A BETTER UNDERSTANDING OF NORTH PENINSULAR GULF COAST FLORIDA PREHISTORY: ARCHAEOLOGICAL RECONNAISSANCE IN DIXIE COUNTY.

Archaeological reconnaissance conducted in portions of Dixie County and selected adjacent sections of Taylor and Levy Counties, Florida, resulted in the description of 28 sites that, along with the region's previously known sites, represent occupation from the Archaic to the Historic periods. Of particular interest are several Dixie County sites containing pure or dominant Alachua Tradition components and one Taylor County site that has a pure Swift Creek assemblage. Prior to this reconnaissance, Alachua Tradition sites were thought to be rare outside North-Central Florida and pure Swift Creek sites were unknown on the Florida peninsula. Future work will attempt to provide an absolute chronology for the region, then focus on

determining the temporal and spatial relationships between the Alachua Tradition groups and the region's Weeden Island-related peoples. (11/8, 8:40 AM)

Johnson, G. Michael (see Kohler, T. A.)

Johnson, Jay K. (U Mississippi), Thomas L. Sever (National Space and Technology Lab.) and Scott L. H. Madry (National Space and Technology Lab.) REMOTE SENSING AND ARCHAEOLOGICAL RESEARCH DESIGN IN NORTH MISSISSIPPI.

Land survey records, digitalized soil data and LANDSAT TM data are combined to allow a large scale reconstruction of the environmental variables which are thought to have been critical in the prehistoric use of the uplands of North Mississippi. The techniques used in integrating these data and a preliminary test based on limited archaeological survey results are discussed. The resultant model is used in designing a stratified random sampling strategy for the area. (11/7, 11:00 AM)

Jones, Douglas S. (see Quitmyer, I. R.)

Judge, Christopher (U South Carolina) THE WATEREE VALLEY ABORIGINAL VESSEL MORPHOLOGICAL ASSEMBLAGE: FORM AND PHYSICAL ATTRIBUTES AS INDICATORS OF FUNCTION.

Recent research of whole vessels in private collections and archaeological specimens from an underwater context at the Mulberry site (38KE12) in North Central South Carolina has enabled the construction of a Wateree Valley vessel assemblage. The analysis of physical attributes combined with the study of form and surface treatment has enhanced the interpretation of vessel function in Mississippian society. Burial practices, foodways, and ceremonialism are discussed. (11/7, 2:00 PM)

Keel, Bennie C. (U.S. National Park Service) FEDERAL ARCHEOLOGY IN GEORGIA: AN OVERVIEW.

Federally supported or required archeological studies began in Georgia during the 19th Century. Federal archeological investigations have been the single most important stimulus for the development of Georgia archeology. Early investigations such as those conducted by the Division of Mound Exploration and Smithsonian Institution are noted, projects such as Wauchope's North Georgia survey and Kelly's Macon work from the first half of the 20th Century are described, and River Basin Salvage program efforts of the 50's and 60's are provided. The activities brought about by the National Historic Preservation Act of 1966 and the Archeological and Historic Preservation Act of 1974 are described and discussed. (11/6, 9:00 AM)

Keene, David (Loyola U, Chicago) THE ARCHAEOLOGY OF RECONSTRUCTION: EXCAVATIONS AT FORT DE CHARTRES.

Current excavations at Fort de Chartres in Illinois are providing architects and engineers with information necessary for the reconstruction of this limestone fort constructed by the French in 1752. This paper will examine the architecture of



the fort in relationship to the Vauban model and other forts in the Mississippi Valley discussing the importance of archaeological research not only in the area of reconstruction but also in defining the role of this site on the 18th century frontier. (11/6, 8:20 AM)

Kidder, Tristram R. (Harvard U) PROTOHISTORIC AND EARLY HISTORIC CULTURE DYNAMICS IN SOUTHEAST ARKANSAS AND NORTHEAST LOUISIANA, A.D. 1500-1700.

Archaeologists working in the Lower Mississippi Valley have recognized that the period between the departure of the remnants of the DeSoto expedition, and the arrival of the French in the later part of the seventeenth century, is critical to understanding Native adaptation to European contact. However, until recently, the data base in southeast Arkansas and northeast Louisiana has not been sufficiently detailed to allow archaeologists to address the nature of protohistoric cultural interaction and adaptation. This paper is a review of protohistoric and early historic archaeological data from parts of the Tensas, Boeuf, and Ouachita basins in Arkansas and Louisiana. The paper has three goals: 1) to review the current data base with particular attention to work conducted by C. B. Moore on the Ouachita River and Bayou Bartholomew in 1909, 2) to organize the extant data in an up-to-date culture historical framework, and 3) to utilize the data to explore some of the ramifications of protohistoric culture dynamics in one part of the Lower Mississippi Valley. This final part of the paper will focus on outlining a series of working hypotheses which seek to describe the pattern of aboriginal interaction in the study region during this time of culture change and instability. (11/6, 3:00 PM)

Klippel, Walter E. (U Tennessee) and Paul W. Parmalee (U Tennessee) RAPTOR PREDATION AND THE ARCHAEOLOGICAL RECORD.

Raptors frequently contribute vertebrate, and sometimes invertebrate, remains to archaeological deposits, especially in caves and rockshelters. Remains identified from owl pellets include small animals generally not attributed to human subsistence activities, but some species recovered from pellets are routinely considered prehistoric human subsistence items. Raptor prey remains from eastern North America are compared to faunal remains from prehistoric archaeological contexts. (11/6, 3:20 PM)

Klippel, Walter E. (see Snyder, L.)

Knight, Vernon James, Jr. (U Alabama) HIGHLIGHTS OF THE FEDERAL ARCHAEOLOGICAL PROGRAM IN ALABAMA, 1966-1986.

The Federal Archaeological Program has, without question, changed the general character of Alabama archaeology over the past twenty years. Most of the obvious changes are matters of increased scale, both in knowledge and in the organization of research. More subtle, substantive contributions to method and theory can be traced in a brief review of five of the program's most ambitious projects carried out in Alabama between 1966 - 1986. (11/6, 8:00 AM)

Kohler, Timothy A. (Washington State U) and G. Michael Johnson (Washington State U) FROM SHIRED ISLAND TO MCKEITHEN: WHAT WE DO, AND DON'T, KNOW ABOUT LATE WOODLAND IN NORTH FLORIDA.

Late "Woodland" societies in Florida are briefly surveyed with special attention to the North, Northcentral, and North Peninsular Gulf Coastal areas. Certain comparisons and contrasts are drawn with approximately contemporaneous societies in the North American Southwest, and with selected early European Neolithic societies, to help determine the extent to which the developments reconstructed for Florida are unique to a particular cultural and ecological setting. Models to explain change in these Florida societies are in very early stages of development, but we will examine the extent to which models developed for other areas fit the Florida data. A research plan to make progress on differentiating among competing explanations for change in the North Peninsular Gulf Coast area is outlined. (11/6, 11:20 AM)

Kohler, Timothy A. (see Johnson, G. M.)

Kowalewski, Steven A. (U Georgia) A CONCEPTUAL FRAMEWORK FOR SOCIAL EVOLUTION.

Scale is population or spatial size of a system, boundedness describes the permeability of its physical margin, complexity refers to the number and nature of horizontal and vertical segments, integration describes the interaction and interdependence among segments, and centralization is the degree to which activities are concentrated in a single place. These concepts are useful and interesting because they can be represented by archaeological and historical data and because they permit cross-cultural comparison without much violation of local peculiarities. This paper illustrates the approach with alternative characterizations of the Oconee province in piedmont Georgia. (11/7, 4:20 PM)

Kuttruff, Carl (Tennessee Div. of Archaeology) LATE WOODLAND SETTLEMENT AND SUBSISTENCE IN THE LOWER KASKASKIA RIVER VALLEY, ILLINOIS.

A previously formulated model of Late Woodland Settlement and Subsistence systems in the Lower Kaskaskia River Valley, Illinois, is reevaluated. Suggested modifications of the first model are based on more recent surveys and excavations in the Kaskaskia drainage and surrounding areas, as well as further analyses of existing data. (11/6, 9:00 AM)

Kuttruff, Carl (Tennessee Div. of Archaeology) THE MOUND BOTTOM AND PACK SITES IN MIDDLE TENNESSEE.

This presentation provides a summary of the archaeological work that has been carried out at the Mound Bottom and Pack sites in Middle Tennessee. These two closely associated Mississippian period sites represent major civic-ceremonial centers for this region. The most recent work at the Mound Bottom site is detailed. (11/6, 4:20 PM)

Kuttruff, Jenna Tedrick (Ohio State U) A TWINED BAG FROM BIG BONE CAVE, TENNESSEE: MANUFACTURE, REPAIR, AND USE.

A twined bag recovered from Big Bone Cave which is located in Van Buren County, Tennessee, provides a record of textile manufacture, repair and use in the prehistoric Southeast. A variety of vegetal materials were incorporated into the bag in both its manufacture and repair. Yarn and fabric analysis reveals information about the processes used as well as the technical skills of the person or persons involved in its manufacture and repair. From the analysis of use, wear, maintenance, and discard patterns inferences are made relating to the daily activities and values of the society which produced this textile product. (11/7, 1:40 PM)

Lafferty, Robert H. III (Mid-Continental Research Associates) NEW DESIGNS OF WATERSCREENS.

In 1968, as I was leaving the Tellico project to take a tour in the army, J. B. Graham described an idea he had for a heavy duty waterscreen system. Since that time this technology has become a major method of recovering archeological materials on large excavations in the Southeast. This paper briefly describes the evolution of this technology over the past 18 years and presents a design of a waterscreen system that in a recent excavation in Arkansas operated at twice the capacity of the early systems. (11/8, 10:40 AM)

Lenhardt, D. (see Alexander, L. S.)

Lewis, R. Barry (U Illinois) THE LATE MISSISSIPPI PERIOD IN KENTUCKY.

This paper describes the major conclusions of a recent synthesis of available information concerning late Mississippi period occupations in western and central Kentucky. The late prehistory and protohistory of Kentucky are of interest for several reasons. First, there is little published information about it relative to what is available from adjacent States. Second, the scientific understanding of the archaeological record of this large region is crucial to accurate interpretations of the prehistory of several major drainages of the Mid-Continent. Third, the region falls within the "Dark and Bloody Ground" of some historians and the "Vacant Quarter" of some archaeologists. If the latter categorizations are accurate ones, then the archaeological record should show some major, perhaps even catastrophic, cultural changes during the late Mississippi period. (11/7, 11:00 AM)

Lindstrom, Bruce (Middle Cumberland Archaeological Society) THE ANDERSON SITE (40WM9): A MIDDLE ARCHAIC OCCUPATION IN MIDDLE TENNESSEE.

This shell midden site along the Harpeth River was partially excavated in 1980 and 1981. Forty-eight features and 73 human burials, along with thousands of lithics and bone artifacts were recovered. The many gastropod shells in the midden neutralized the natural acidity of the soil and contributed to extremely good preservation of human and animal bone remains. Carbon 14 dates suggest that the Anderson Site was occupied for about 1100 years from about 4800 B.C. to 3700 B.C. (11/6, 3:40 PM)

Lloyd, Janet R. (U West Florida) INVESTIGATIONS IN A FIRST SPANISH PERIOD (CIRCA 1752-1762) COMMUNITY REFUSE AREA IN PENSACOLA, FLORIDA.

In the implementation of the city archaeological ordinance in Pensacola, compliance work in conjunction with the renovation of sidewalks and streets in the oldest portion of the city has been performed. This area of the city was the center of colonial Spanish and British military, government, residential and commercial activities. Archaeological investigations documented the presence of a sealed midden and intact features which appear to have been a community refuse area from the first Spanish occupation of what is now Pensacola. This will furnish baseline information for this area on this cultural period in Pensacola and can be used in comparison to that recovered from St. Augustine to further understand Spanish settlement in Florida at that time. (11/7, 9:00 AM)

Lyman, R. Lee (U Missouri) PLOWZONE ZOOARCHAEOLOGY: WHAT WE CAN LEARN.

The research potential of archaeofaunal remains recovered from the plowed surface of sites has seldom been discussed. Analysis of the archaeofauna recovered from the middle Woodland period Burkemper Site (23LN104) in east-central Missouri illustrates that the remains of different taxa tend to display distributions similar to those shown by various artifact categories, bone fragment size classes are differentially distributed perhaps as a result of community patterning, and fragmentation allegedly caused by plowing requires additional study in order to control for fragmentation resulting from prehistoric butchery and marrow extraction. (11/6, 1:40 PM)

MacCord, Howard A., Sr. THE VIRGINIA PLAN: ARCHEOLOGY BY ECHELONS.

A new concept for doing archeology is offered, paralleling the Army's vehicle maintenance and repair system. Archeology is seen as an in-depth operation, divisible into four echelons. First, is the Public, including landowners, collectors, construction workers and others who are "on-site". They can protect, collect from, or report sites, and when needed help on Rescue work done there. A second echelon is a local archeologist, either professional or non-professional. Third echelon is the nearest college, university, or museum with a professional archeologist on board. The fourth echelon is the State (SHPO) set-up, which serves to coordinate and support all lower echelons. Key elements are the first and second echelons, largely neglected in most states. To finance having a professional archeologist at the second level, the Plan envisions having the archeologist contract his/her services to local cities and counties to serve as their part-time archeologist, in return for which he/she will give a fixed number of days of professional services to the governments involved and to the citizens of those areas. In a long-term commitment, the second echelon archeologist will become thoroughly familiar with the area's geography, people, history, archeological resources, and resources for rescuing data from lost sites, and this sort of set-up is seen as long over-due in most states. The ideas embodied in the Plan have been tested individually in Virginia over the past two decades and found productive and feasible. Needed now is full implementation, with official SHPO backing. (11/7, 8:20 AM)

Madry, Scott L. H. (see Johnson, J. K.)

Mainfort, Robert C. (Tennessee Div. of Archaeology), Thomas H. Bianchi (Tennessee Div. of Archaeology) and W. Richard Yarnell (Tennessee Div. of Archaeology)  
EMERGENT MISSISSIPPIAN OCCUPATION IN THE REELFOOT LAKE AREA.

Recent archaeological surveys and test excavations in the vicinity of Reelfoot Lake (Lake and Obion Counties, Tennessee) are discussed. Prehistoric occupation in the area was substantial, particularly during the Late Woodland and Early Mississippian periods. Six platform mounds, dozens of conical mounds, and numerous large habitation sites attributable to these periods have been recorded. Shell tempered ceramics (notably Varney Red) occur in association with thick, grog tempered wares at many of these sites. Major site locations correlate nicely with relict channels of the Mississippi River, a fact that has important implications for the alleged creation of Reelfoot Lake by the major earthquakes of 1811-1812. Several pertinent radiocarbon dates are also presented. (11/7, 11:20 AM)

Marquardt, William H. (U Florida) ENVIRONMENT AND PRODUCTION IN  
PREHISTORIC SOUTHWEST FLORIDA.

The complex Calusa chiefdom dominated south Florida from its heartland in the Charlotte Harbor/Pine Island Sound area, yet little is known in detail about the emergence of this sedentary, but ostensibly nonhorticultural, society. Our research team has conducted archaeological testing at Josslyn Island (8LL32), Buck Key (8LL55), Useppa Island (8LL51), and Cash Mound (8CH38), representing a time range of approximately 3500 B.C. to A.D. 1350. A year of gathering and interpretation of ceramic, geological, paleobiological, and human skeletal data has led to a better understanding of local environmental variability and resource utilization through time. In this paper I provide preliminary results and explain the role of these and additional data in the long-term investigation of the emergence of cultural complexity in southwest Florida. (11/8, 9:20 AM)

Marrinan, Rochelle (Florida State U) ACCULTURATION IN THE MISSION SETTING:  
SPANISH FLORIDA, 1565-1704.

Anthropologists have been actively interested in the study of acculturative processes since the 1930's. Historic archaeological sites offer excellent opportunities for the study of acculturation. Sites of the Franciscan mission chain, dating from approximately 1570 to 1704, are examples of archaeological contexts in which such studies may be pursued. Archaeologists have been working in the mission sites of Florida since the late 1940's. Hale G. Smith, among the earliest in this endeavor, recognized the potential of mission sites for the study of acculturation. The field effort has been intermittent, however. B. Calvin Jones, whose research has focused on the mission sites of West Florida, has provided continuance of the effort during the late 1960's and early 1970's. This paper will address the potential of mission sites for evaluating acculturation, what we have learned in the past 40 years, and the directions of current research. (11/6, 1:40 PM)

Martin, Terrance J. (Illinois State Museum) and Beverly E. Bastian (Gilbert/Commonwealth Inc.) STATUS AND CHOICE IN THE FORMATION OF HISTORIC FAUNAL ASSEMBLAGES: AN EXAMPLE FROM ASHEVILLE, NORTH CAROLINA.

Socio-economic status and consumer choice are viewed as taphonomic processes that affect the formation of historic archaeofaunal assemblages. Because of differential access to market goods, the status level of those responsible for particular bone refuse in urban areas largely determines which animal species and butchering units will be represented. Excavation of deposits in the heart of the traditional black business district of Asheville, NC, by Gilbert/Commonwealth in 1985 produced a large assemblage of artifacts and faunal remains associated with a variety of commercial activities dating from approximately 1896 to 1917. Status of the sites' inhabitants would have ranged from working class to middle class. Patterns derived from the animal remains are consistent with variable status levels in that the assemblage consisted of locally obtained domesticated and wild animals along with marine fish and mollusks. Also encountered was an older domestic refuse midden that accumulated between 1870 and 1895 when several wooden shanties, presumably occupied by blacks of low status, were present in the area. Although the animal remains from this earlier occupation do not contradict this impression, only a small sample was available for study. (11/6, 1:00 PM)

Mathis, Mark A. (N Carolina Div. of Archives and History) NORTH CAROLINA ARCHAEOLOGY SINCE 1966: TWO DECADES OF FEDS OVER THE SHOULDER.

A review of the last 20 years reveals that the role of the federal government in North Carolina archaeology has been generally beneficial, not only for the knowledge gained but for the positive impact on the public and private sectors regarding the protection and preservation of cultural resources. The federal role is most apparent in the numbers and types of investigations conducted in response to the regulatory compliance requirements embodied in the National Historic Preservation Act of 1966 and attendant legislation. Some of these investigations represent the highest of research standards and have contributed substantial new information about the state's past. Other tangible affects can be defined in terms of state program development, overall professional employment and public awareness. It is within this context that this paper examines some of the major research advances and program developments in North Carolina archaeology over the last two decades. (11/6, 10:40 AM)

McBride, W. Stephen (Michigan State U) THE VILLAGE BLACKSMITH IN THE ANTEBELLUM SOUTH: THE GRISWOLD SHOP, BARTON, MISSISSIPPI (1851-1860).

Although ubiquitous just over a hundred years ago, blacksmiths have now almost completely disappeared, and with them an understanding of their exact role and position in their community. In this study I will examine archaeologically and historically a blacksmith shop in the small antebellum town of Barton, Lowndes County, Mississippi. I will first examine, through the use of artifact distributions and feature locations, the layout and work areas of the shop. Secondly, I will use account records and archaeological remains from the shop to examine what metal working services were provided to the town and surrounding countryside. And finally, through the use of census and tax records I will examine the relative position of blacksmiths in Lowndes County and in Mississippi in general, areas not known for an abundance of white artisans during plantation slavery. (11/6, 10:40 AM)

Miller, James J. (Florida Bureau of Archaeological Research) TWENTY YEARS OF FEDERAL ARCHAEOLOGY IN FLORIDA.

The influence of federal archaeology in Florida since 1966 has been extensive rather than intensive. There have been no major river basin or dam construction projects requiring impact assessment surveys or massive salvage excavations. Federal land managing agencies with large holdings are National Park Service, Forest Service, Department of Defense and Fish and Wildlife Service; altogether federal lands constitute 9.4% of the state or roughly 3.5 million acres. Records kept by the Florida Division of Historical Resources show that federal agencies have reported 35% of all archaeological surveys and excavations in Florida conducted since 1973. Overall, the federal government has instituted the programs necessary to manage its properties in accordance with historic preservation mandates. This paper will summarize the more than 350 federal archaeological projects in Florida, many of which are small in scale, and focus more directly on the major accomplishments of the agencies in large scale survey and site management. (11/6, 8:40 AM)

Milner, George R. (Pennsylvania State U) and Richard W. Jefferies (U Kentucky) MOUND CONSTRUCTION, MORTUARY PRACTICES, AND PALEODEMOGRAPHY: A REEXAMINATION OF AN ADENA MOUND IN KENTUCKY.

New information is presented on the large Robbins Mound (15BE3), once located in Boone County, Kentucky, based on a reanalysis of field records and museum collections from William S. Webb's New Deal archaeological program. Attention is directed toward integrating data on mound construction episodes, mortuary practices, and the demographic characteristics of the population interred within the mound. The configuration of the cemetery, specifically the location of the mound's apex and its overall shape, changed through time. This modification in form is illustrated through the use of computer-generated graphics portraying eight construction episodes. The distribution of mortuary features within the mound is explicable only after the delineation of these mound-building episodes. This study represents the first stage of a reevaluation of Adena cultural manifestations in Kentucky, and it demonstrates the continuing research significance of existing museum collections. (11/8, 8:40 AM)

Mitchem, Jeffrey M. (Florida State Museum) and Dale L. Hutchinson (U Illinois, Urbana-Champaign) THE TATHAM MOUND, CITRUS COUNTY, FLORIDA: THIRD FIELD SEASON.

The third field season of excavations at the Tatham Mound is ongoing during the fall of 1986, under the direction of Jerald T. Milanich (Florida State Museum). Late prehistoric and early contact (early sixteenth century) burials and associated artifacts continue to be recovered. Types of glass beads recovered so far strongly suggest contact with the Narvaez and/or Soto entradas during the first half of the sixteenth century. Direct contact is implied by the presence of sword-like wounds on some of the aboriginal bones. (11/6, 1:00 PM)

Morse, Dan F. (see Dye, D. H.)

Muller, Jon (Southern Illinois U) MISSISSIPPIAN PRODUCTION MODES: THE LOWER OHIO VALLEY.

Theories of hierarchical development and specialization range from concepts of circumscription and/or resource concentration to proposals of staple finance systems.

As a low-level, hierarchical society, lower Ohio Valley Mississippian has much to offer in testing these diverse theories of social development. The conditions of Mississippian production are discussed with attention to the special circumstances of Mississippian culture. Past studies of single production systems in Mississippian have focused on details of production itself and provide a basis for consideration of broader social issues.

Examined in its broader social context, Lower Ohio Valley Mississippian shows distinctive production system features that may be more typical of early hierarchical development in general than has been appreciated by social theorists. It is argued that present data on lower Ohio Valley Mississippian do not support those theories that emphasize division of labor as a causal or prime component in the development of hierarchies. (11/7, 10:20 AM)

Nance, Jack D. (Simon Fraser U) ARCHAIC CULTURE IN THE LOWER TENNESSEE-CUMBERLAND-OHIO REGION.

Recent research into the Archaic period occupation of the lower Tennessee-Cumberland-Ohio Valley region is reviewed and resultant data are summarized. A review of Archaic chronology and the content of the archaeological record over a 5000 year interval indicates that the early part of the Early Archaic period has not been documented in the region, a "shellmound" Archaic is lacking, and that significant changes in Archaic culture occurred during this period. Data relating to the above points are discussed and possible explanations for the absence of shell middens and the cultural changes are suggested. (11/7, 9:00 AM)

Nassaney, Michael S. (U Massachusetts) MODELING LATE WOODLAND SOCIETAL INTEGRATION: A CENTRAL ARKANSAS CASE STUDY.

The Late Woodland period (A.D. 600-800) in the Southeast has generally received less attention than the more archaeologically spectacular earlier and later Middle Woodland and Mississippi periods, respectively. However, such is not the case in central Arkansas. The visibility of Plum Bayou culture, best known from investigations at its paramount center, the Toltec Mounds site, appears to represent an exception. The Plum Bayou cultural florescence underscores the marked degree of variability in social systems and their archaeological manifestations on a regional scale throughout much of the Southeast during the Late Woodland period. Analytical methods are offered to delineate societal integration and settlement interaction within the context of an explanatory model that accounts for local and regional settlement-subsistence variation through time and space. (11/6, 1:40 PM)

Nassaney, Michael S. (see Cobb, C. R.)

Newman, Christine (Archaeological and Historical Conservancy, Inc.) ARCHAEOLOGICAL INVESTIGATIONS AT THE CHEETUM SITE, DADE COUNTY, FLORIDA.

Archaeological investigations were conducted at the Cheetum site (8DA1058), a midden with associated burial area, in Miami, Dade County, Florida. This site was



located on a tree island in what once was a portion of the Florida Everglades. The focus of the work was to locate and remove the human burial material from the site and to map and identify any features present. Heavy equipment was used to remove the midden soil exposing the cement-like concretion level. The remains of approximately 25 individuals were located within this level. Work at the site has provided insight into the prehistoric Glades II and III occupation in South Florida. (11/8, 9:00 AM)

Newsom, Lee A. (U Florida, Gainesville) and Deena S. Decker (Texas A&M) ARCHAEOLOGICAL CUCURBITACEAE FROM PENINSULAR FLORIDA.

Remains of plants in the family Cucurbitaceae have been recovered from seven archaeological localities in peninsular Florida. These include bottlegourd seeds and rind, and seeds, rind, and peduncles belonging to *Cucurbita pepo* (pumpkins, squashes, gourds). Two of the sites, Hontoon Island (8VO202) and Key Marco in Lee County, contained water-saturated deposits which yielded extremely large quantities of cucurbit remains. The large sample size has made statistical analyses of the seeds possible. Pepo seeds were found to fall into four distinct groups based on relative size and overall morphology. These have been compared to modern analogues and the preliminary results are presented here. (11/7, 1:00 PM)

Noble, Vergil E. (Illinois State U) CERAMICS FROM THE LAST FORT DE CHARTRES (11 R 127), A FRENCH GOVERNMENTAL CENTER ON THE MISSISSIPPI.

Fort de Chartres was the name given to several French military installations on the Mississippi River south of St. Louis in what is now Randolph County, Illinois. The last of these was a stone fortification built in 1753. For many years its ruins, which are preserved as a state historic site, have been the focus of intermittent archaeological investigations.

In 1985, the Illinois Historic Preservation Agency funded new excavations at the site in conjunction with proposed reconstruction activities. As part of the project scope-of-work, Illinois State University was to restudy all extant collections derived from previous excavations and produce a comprehensive report on the history and archaeology of Fort de Chartres. The task entailed summarizing no fewer than six field seasons of research by four different excavating teams working over a fifteen-year period.

This paper examines the diverse ceramic assemblage, which is one of the most remarkable collections of 18th-century wares derived from an occupation site in North America. The various ware types represented are described and illustrated, with particular attention given to the interesting faience specimens. The assemblage is then compared to collections derived from contemporary sites in terms of demographic, economic, and functional differences. (11/6, 8:00 AM)

Oakley, Carey B. (U Alabama) ADMINISTRATIVE METHODS INVOLVED IN MODERN DAY ARCHAEOLOGICAL RESEARCH.

The past twenty years has brought about radical changes in how archaeological projects are implemented. Beginning with the various federal preservation funding statutes developed during the 1960's and continuing through today, archaeology has

become big business both for universities and private enterprise. It is the purpose of this paper of describe some of the changes that have taken place utilizing The University of Alabama as one example of a successful research program.

In this paper I propose to discuss how one attempts to seek some equilibrium and still maintain a day-to-day management of an archaeological program. In order to do so one must be a jack-of-all-trades ranging from a clinical psychologist to a plumber. J. B. Graham's greatest contribution to my career, aside from teaching me good basic field techniques, principally lies within the constant balancing of trained personnel, necessary funding, equipment needs and supplies in order to produce a successful product. That product, be it an archaeological excavation, a final report, an exhibit, or simply the curation of archaeological materials, must have some genesis of thought from its very implementation until its final outcome. (11/8, 11:40 AM)

O'Malley, Nancy (U Kentucky) EARLY REDWARE PRODUCTION IN THE BLUEGRASS REGION OF KENTUCKY.

Recent excavations at a late eighteenth-early nineteenth century residential site and survey in the surrounding land tract revealed the presence of an early redware-producing pottery kiln operated by James Ingels in Bourbon County, Kentucky. Ingels purchased the property in the late 1780s and was listed as a potter in the 1820 census. Excavations of a former pioneer station which later served as a residence, and collections from a waste dump yielded large quantities of pottery and kiln furniture which were analyzed for this presentation. Types of redware ceramics were recognized and are presented. Although the occurrence of early pottery kilns are known for Kentucky, this site complex represents the first officially recorded site of pottery production for the late eighteenth-early nineteenth century period. (11/6, 9:20 AM)

Pacheco, Paul (Ohio State U), Charles Janini (Ohio State U) and Paul Sculli (Ohio State U) LONG BONE VARIABILITY, LIMB PROPORTIONS AND STATURE IN THE TERMINAL LATE ARCHAIC OF OHIO.

Variation in long bones is compared among seven terminal Late Archaic skeletal samples of Ohio. Ten measures of the humerus (N=153), ten measures of the ulna (N=120), three measures of the radius (N=74), nine measures of the femur (N=122) and three measures of the tibia (N=72) show no significant differences in size or shape among the samples. Sexual dimorphism accounts for most of the variation in the Ohio samples and the magnitude of sexual dimorphism is shown to be similar to other eastern Native American samples.

Limb proportions in the terminal Late Archaic samples indicate individuals in these samples were characterized by relatively long distal limb segments. This suggests these populations or their immediate ancestors inhabited an environment warmer than present central and northwestern Ohio. However, additional considerations are discussed.

Stature as estimated from the femur and tibia shows that, at least as far back as the terminal Late Archaic, populations in the northern sections of eastern North America are among the tallest in the new world. (11/7, 11:00 AM)

Parmalee, Paul W. (see Klippel W. E.)

Pauketat, Timothy R. (U Michigan) MISSISSIPPIAN CERAMIC REFUSE AS AN INDEX OF OCCUPATION SPAN: AN AMERICAN BOTTOM EXAMPLE.

Determinations of late prehistoric homestead occupation spans in the American Bottom area of southwestern Illinois can be made by quantifying three primary components — a behavioral assemblage (i.e., domestic activity set), pot life-span and a discard assemblage of broken pots. Behavioral and discard assemblages dating from the Stirling phase can be isolated in the American Bottom, given an understanding of formation processes and domestic behaviors. Pot life-span values may be obtained from ethnographic data, with proper caution. When combined, these components point to a considerable range of occupation span among Mississippian homestead locations. (11/7, 8:00 AM)

Polhemus, Richard R. (U Tennessee) SMALL DIAMETER CORING: A NEW ANSWER FOR OLD PROBLEMS.

The application, and adaptation, of small diameter coring to a range of archaeological problem solving is described. Examples of such application and adaptation on prehistoric and historic sites in the southeastern United States are provided. Advantages and limitations of small diameter coring are discussed. Small diameter coring serves as an energy efficient adjunct to traditional archaeological techniques as well as providing tangible spatial, stratigraphic, and quantitative data in its own right. (11/8, 9:00 AM)

Pope, Melody K. (SUNY, Binghamton) MICRODRILLS FROM THE MOUNDVILLE REGION: TECHNOLOGY, FUNCTION AND CONTEXT.

This paper describes the results of a high-power use-wear analysis of microlithic tools from 12 sites located in the Black Warrior valley of west-central Alabama. These artifacts were collected in 1978 and 1979 as the result of a survey of the Moundville area by the University of Michigan Museum of Anthropology. A total of 106 pieces were examined microscopically. The results indicate that a restricted range of activities were carried out with these tools: primarily drilling of shell, but evidence for the drilling of bone is also represented. In addition, the sample of microlithic tools, microblades, and cores was subjected to morphological and technological analyses. This evidence is combined with the use-wear data to define the characteristics of the Black Warrior valley microlithic industry. To conclude, the spatial distribution of elements of this industry are briefly described to examine organization of production within its wider social and cultural context. (11/7, 2:20 PM)

Potter, William L. (Murray State U) and Kenneth C. Carstens (Murray State U) FLORAL RECONSTRUCTION AND EARLY NINETEENTH CENTURY LAND SURVEYS IN WESTERN KENTUCKY: A TEST CASE FROM THE FORT JEFFERSON STUDY AREA.

The first recorded historic American settlement in extreme western Kentucky was Fort Jefferson and its associated and adjacent civilian community of Clarksville.

Built in April of 1780, and abandoned during June of 1781, the fort and community briefly represented Virginia's physical claim to its chartered western boundary. After abandonment, however, that same region did not become legal for American settlement until 1818, when "Jackson's Purchase" was incorporated as a part of western Kentucky.

Very few original 18th century references describe the physical setting in which and from which the fort and community were constructed. However, early 19th century land surveys of "Jackson's Purchase" do survive and have been used to determine the probable vegetational and physiographical characteristics of the Fort Jefferson study area. Although the early 19th century environmental information was found to be particularly useful, broad generalizations based on the application of such environmental data should be used only with extreme caution. (11/6, 9:00 AM)

Prichard, Mack S. (Tennessee Department of Conservation) TENNESSEE'S ARCHAEOLOGICAL CONSERVATION.

This presentation outlines the Conservation Department's efforts to preserve Tennessee's archaeological heritage during this century through the foundation of the Tennessee Division of Archaeology in the early 1970s. The philosophy of the archaeological park system is outlined, and the range of the Conservation Department's archaeological and historical parks and holdings is illustrated. (11/6, 3:00 PM)

Purdue, James R. (see Styles, B. W.)

Purrington, Burton L. (Southwest Missouri State U) THE PISGAH SURVEY: UPLAND ARCHAEOLOGY IN THE APPALACHIAN SUMMIT OF NORTH CAROLINA.

A survey of rugged, heavily wooded upland terrain in the Pisgah National Forest, Madison County, North Carolina, was conducted to develop predictive models for future surveys in the Forest. A transect of 25 10-acre units running from ridgetop to river and crossing a wide range of low, intermediate, and high probability landform types was intensively surveyed and the results were compared with a second phase of surveys of high visibility areas and high probability landforms. Over 60 sites in a wide but generally predictable range of environmental settings and representing a temporal range from Early Archaic occupations to a busted historic moonshine still were recorded. Based on the survey results a sampling program designed to maximize productivity and cost-effectiveness of future surveys in the Forest is recommended. (11/7, 9:40 AM)

Quitmyer, Irvy R. (Florida State Museum, U Florida), Debora F. Cannon (Florida State Museum, U Florida) and Douglas S. Jones (Florida State Museum, U Florida) PALEOSEASONALITY DETERMINATION BASED ON INCREMENTAL SHELL GROWTH IN THE HARD CLAM, MERCENARIA MERCENARIA, AND ITS IMPLICATIONS FOR FUTURE ANALYSIS OF COASTAL SHELL MIDDENS FOUND ALONG THE GEORGIA COAST.

Annual incremental growth structures found in the shells of the hard clam Mercenaria mercenaria represent a powerful tool for estimating the paleoseasonality of aboriginal settlements. Considerable research indicates the changes in the chemical and microstructural elements of the growth increments are associated with the seasons

of the year. Many of these studies, however, are based on small sample sizes collected over intervals of less than one year. This study compares the annual growth increments of two modern biological samples of hard clam collected from the Kings Bay, Georgia estuary: 1) an eleven month, 1981-82, sample of 69 individuals; 2) a twelve month, 1983-84, sample of 270 individuals. Though variability in the timing of growth increment formation is observed between the two samples, a consistent pattern of growth is evident. These data indicate the harvest of clams at the Kings Bay Savannah components (9CM177) was through the year with a fall emphasis, while there was continual collection of clams through the year at the Swift Creek component (9CM171a). The results of this research suggest year-round collections of modern clams are sufficient to form the basis for paleoseasonality studies. (11/7, 2:40 PM)

Radisch, William H. (U S Carolina) CLASSIFICATION AND INTERPRETATION OF METAL STARS FROM SANTA ELENA: SOME PROBLEMS AND POTENTIAL SOLUTIONS.

This paper deals with some problems and potential solutions as these relate to the classification and interpretation of small metal stars recovered from the site of the Spanish Colonial city of Santa Elena (38BU162). A variety of analytical tools, research sources, and theoretical approaches were employed to isolate the functions and meanings which these stars may have had in the activities and lives of the inhabitants at this sixteenth century (1566-1587) settlement. (11/6, 11:00 AM)

Ramenofsky, Ann F. (Louisiana State U) A CONSIDERATION OF STABILITY OR CHANGE IN THE SIXTEENTH CENTURY SOUTHEAST.

Recently, archaeologists have renewed their interest in the sixteenth century archaeological record from the Southeast. The proximity of the Southeast to European centers in Mexico or the Caribbean and the degree of contact between these regions and the Southeast make the latter of some importance for investigating anthropological assumptions of stability or change in aboriginal demography and culture. In this paper, these assumptions are evaluated in two ways. The possibility of diffusion of infectious diseases into and throughout the Southeast is considered from an epidemiological perspective. The characteristics of archaeological settlements are employed as analogues of population to suggest demographic and systemic trends throughout the century. (11/7, 3:40 PM)

Reitz, Elizabeth J. (U Georgia) URBAN SITE FORMATION PROCESSES AND THE FAUNAL RECORD.

The same processes active in the formation of prehistoric sites have also been involved in the formation of historic sites. Data from the Charleston Beef Market, upper and lower class residential/commercial Charleston sites, as well as a near-by plantation demonstrate that pre- and post-depositional activities have been important components in their creation. It appears that natural traps, carnivores, and weathering are responsible for some of the characteristics of the faunal assemblages. Patterns in the types of elements identified, however, suggest that the influence of animal husbandry practices, choice of meat in the market, and on-site butchering has not been obscured altogether. (11/6, 1:20 PM)

Riggs, Brett H. (U Tennessee, Knoxville) SOCIOECONOMIC VARIATION IN FEDERAL PERIOD OVERHILL CHEROKEE ARCHAEOLOGICAL ASSEMBLAGES.

During the early nineteenth century, Cherokee society rapidly evolved from its traditional state of social and economic homogeneity into a state of marked socioeconomic heterogeneity. This transformation is attributable to differential acculturation of Anglo-American economic strategies, material culture, and ideologies by various sectors of Cherokee society. Such socioeconomic heterogeneity is expected to be manifested in the archaeological record by a high degree of intercontextual variability in Federal Period Cherokee assemblages, contrasting with low levels of variability in Colonial Period Cherokee assemblages. This proposition is addressed in this paper through comparative analysis of three Federal Period Cherokee assemblages, two Federal Period Anglo-American assemblages, and one late Colonial Period Cherokee assemblage derived from contexts in the Tellico Reservoir Archaeological Project area of eastern Tennessee. Patterns of material variability revealed in this analysis are discussed with reference to the ethnohistoric record and related to Cherokee socioeconomic variability. (11/6, 4:00 PM)

Rippeteau, Bruce E. (S. Carolina Institute of Archaeology and Anthropology) and Steven D. Smith (S. Carolina Institute of Archaeology and Anthropology) SOUTH CAROLINA'S FEDERAL ARCHAEOLOGY: THE ANNUAL SCORE SINCE 1966.

The considerable advances of the last twenty years, in doing (or supervising) archaeology in South Carolina, have been largely made by governmental action. In the State guise and driven by goals enunciated in state law, the S.C. Institute of Archaeology and Anthropology (and with important efforts of the University of South Carolina's Anthropology Department and the Charleston Museum) has, since 1969, been the predominant factor.

In the separate Federal guise, and driven rather by licensing-like requirements attendant to federal agency actions (with some oversight at the State level by the SHPO, and other Department of Interior support), considerable exploration and management (including excavation) has occurred.

The National Park Service, U.S. Forest Service, Corps of Engineers, other Department of Defense agencies such as the Army, Navy, Air Force, Department of Energy, and Department of Transportation have very greatly expanded archaeological knowledge, method, and exhibit in South Carolina, both by regulation and by the setting of example, including absolutely horrendous-sized projects. (11/6, 11:00 AM)

Rogers, J. Daniel (U Chicago) SETTLEMENT CONTEXTS FOR SHIFTING AUTHORITY IN THE ARKANSAS BASIN.

By A.D. 800 prehistoric populations in the Arkansas Basin of Eastern Oklahoma were part of a developing ranked social organization. Directly associated with increased social complexity is the origin of a hierarchy of settlement types. Such sites as the Harlan and Spiro mound groups stand at the apex of settlement systems in the Harlan (A.D. 850-1250) and Spiro (A.D. 1250-1450) phases. By examining changes in the distribution and complexity of settlement hierarchies, high status burials, and exotic trade goods it is possible to suggest a centralization of authority from two centers in the Harlan Phase to a single center at the Spiro site in the Spiro Phase. (11/7, 9:00 AM)

Root, Matthew J. (see Ahler, S. A.)

Rudolph, Teresa P. (U California, Santa Barbara) THE LATE WOODLAND "PROBLEM" IN NORTH GEORGIA.

Any discussions of Late Woodland social integration or the origin of Mississippian societies in northern Georgia are hampered by the difficulty of identifying Late Woodland sites in the area. The two main explanations given for the scarcity of sites are that, in fact, they are rare, and that they exist but have not yet been identified either because sites have been buried by historic alluviation or because insufficient research has led to the failure to recognize diagnostic materials of the period. On a cultural level, the confusion about Late Woodland settlement may be related to social changes occurring during the period as reflected in population movements or localized pottery styles. This paper will examine the chronology and settlement of Middle Woodland and Late Woodland sites in three areas of northern Georgia - the Oconee, the upper Savannah, and Etowah river valleys - in order to address the problem of the scarcity of Late Woodland sites. (11/6, 11:00 AM)

Schenian, Pamela A. (Murray State U) PRELIMINARY REPORT OF INVESTIGATIONS AT THE CRICK SITE (15CW96), A WESTERN KENTUCKY TURKEY-TAIL CACHE.

Archeological excavations at the Crick Site (15CW96) have revealed a large (n=85) Turkey-tail blade cache in association with a sparse surface and subsurface scatter of chert debitage and fire-cracked rock. The large size of the cache, the fact that an Upper St. Louis (non-Wyandotte) chert was used for the manufacture of the cache blades, and the apparent non-mortuary context of the cache provide new data for the examination of intra- and inter-site variability of blade morphology, of raw material selection and procurement, and of the distribution and function of Turkey-tail caches during the Late Archaic/Early Woodland period. In this paper, morphological characteristics of the Crick cache blades are summarized. Variation among the cache blades, the context of the cache, and the probable location of the raw material source are discussed. Some ramifications of the Crick data on previous assumptions about Turkey-tail cache procurement and function are addressed. (11/7, 8:40 AM)

Schock, Jack M. (Western Kentucky U) EXCAVATION OF 40-OB-6: AN EARLY MISSISSIPPIAN CEMETERY AT REELFOOT LAKE IN NORTHWESTERN TENNESSEE.

Three earth mounds were excavated at 40-OB-6 at Reelfoot Lake in Northwestern Tennessee for the Tennessee Soil Conservation Service. Sixty-one burial numbers were assigned. Mortuary items include an effigy rabbit pipe and several Mississippian pots. Eleven Carbon 14 dates were obtained. (11/7, 8:20 AM)

Schroedl, Gerald F. (U Tennessee) and C. Clifford Boyd (Radford U) LATE WOODLAND CULTURE IN EAST TENNESSEE.

Recent research indicates that previous characterizations of Late Woodland culture in east Tennessee require revision. Most archaeological traits once considered diagnostic of this period are now known to have greater temporal distribution and broader cultural affiliation. While Late Woodland period burial mound data have

been used to suggest general patterns of socio-political complexity and territorial organization, proposed settlement-subsistence patterns are still poorly known. (11/6, 10:40 AM)

Scuilli, Paul (see Pacheco, P.)

Sever, Thomas L. (see Johnson, J. K.)

Shapiro, Gary (see Williams, M.)

Sharp, William E. (see Turnbow, C. A.)

Sibley, L. R. (Ohio State U), Kathryn A. Jakes (Center for Archaeological Sciences, U Georgia) and V. S. Wimberley INFERRING BEHAVIOR AND FUNCTION FROM ARCHEOLOGICAL TEXTILE REMAINS.

Recovery of textile remains from archeological contexts in the Southeast presents the analyst with a series of challenges ranging from the generally fragile condition of the fragments to the types of information which can be gained from them. Recent efforts to explore the fabric as fabric and to infer function and behavior from them have resulted in expanding our understanding of fabric as cultural artifact. The purpose of the research is to examine selected archeological textiles of the Southeast as indicators of cultural processes. Three postulates undergird the work: (1) A fabric is a product of interrelated decisions (Wallace 1975); (2) The interrelated decisions/choices reflect function and initiate three sets of behavior associated with procurement and/or processing, use of fabric within the living context of the culture, and placement in the burial context of the culture (Sibley, Jakes, and Larson 1985); (3) Data obtained from a variety of analytical procedures provide evidence of cultural decisions. Selected fabrics from Etowah's Mound C were the focus of intensive evaluation, and the results of the analyses are used to examine a proposed paradigm of fabric as cultural indicator. (11/7, 2:00 PM)

Skrivan, R. (see Alexander, L. S.)

Smith, Gerald P. (Memphis State U) THE WALLS PHASE AND ITS NEIGHBORS.

The Walls Phase and adjacent phases are reviewed as spatially definable cultural units. These phases are most readily distinguished by contrasting frequency patterns of ceramic types, with other contrasts only beginning to come into the known archaeological record. Definition of the spatial units defined here rests upon analogy with ethnographic analyses which suggest that in many cases spatial distributions of particular configurations of traits and trait frequencies correspond with sociopolitical tribal boundaries. New phase names are introduced in some areas where sites are assigned to units differing in extent from those previously defined, and in one case where a new phase is defined on the basis of previously unpublished data. Basic elements of settlement patterns and cultural ecology for each phase as defined are outlined on the basis of currently published data. (11/7, 11:40 AM)



Smith, Lawson M. (see Bennett, W. J.)

Smith, Marvin T. (Garrow & Associates, Inc.) ABORIGINAL POPULATION MOVEMENTS IN THE EARLY HISTORIC PERIOD INTERIOR SOUTHEAST.

European contact set in motion a chain of events that led to great population movements. Using archaeological and ethnohistorical data, this paper seeks to identify and explain some of these movements. Aboriginal groups which underwent repeated contact with sixteenth century Spanish exploratory entradas are shown to have moved earlier, more frequently, and farther than groups spared early, direct contact. These early movements are probably the result of European disease epidemics.

Events of the late seventeenth century, particularly the arrival of northern Indian groups armed with guns, and the English induced slave trade, caused additional, dramatic population movements. (11/6, 3:20 PM)

Smith, Samuel D. (Tennessee Div. of Archaeology) FORT SOUTHWEST POINT ARCHAEOLOGICAL PROJECT, KINGSTON, TENNESSEE.

During 1986, a fourth season of archaeological work has been conducted at the site of Fort Southwest Point, which served as an important Federal Period military garrison from 1797 to 1807 and as the Cherokee Indian Agency from 1801 to 1807. Recent archaeological work, conducted in support of a planned reconstruction of the fort, has focused on the development of a complete understanding of the installation's overall plan. This paper will discuss the development of a graphic version of this plan from archaeological data, summarize other major conclusions derived from the archaeological work, and comment on the kind of National Archives data that exist for interpreting the material remains of this and other Federal Period military sites. (11/6, 10:20 AM)

Smith, Steven D. (see Rippeteau, B. E.)

Snow, Frankie (see Blanton, D. B.)

Snyder, Lynn (U Tennessee) and Walter E. Klippel (U Tennessee) CANID MODIFICATION OF SKELETAL MATERIALS AND FAUNAL REMAINS FROM ARCHAEOLOGICAL SITES.

During 1986 a series of complete, freshly killed white-tailed deer (Odocoileus virginianus) carcasses were placed with a group of five captive timber wolves (Canis lupus) allowed to range freely within a ca. 30 m by 50 m wooded enclosure in Blount County, Tennessee. During each experiment patterns of carcass disarticulation and element destruction were monitored; scat was collected on a daily basis. At the end of each observation period all remaining skeletal elements and bone fragments were collected from the enclosure. These remains were then compared with bone debris and scatalogical material from other modern canids and archeological faunal remains from sites in the Southeast. Analyses of these materials focus on the differential destruction of skeletal elements due to age and size differences of prey animals,

and the development of criteria for distinguishing scatological and other carnivore introduced remains in archeological bone assemblages. (11/6, 4:20 PM)

Spears, W. Steven (Tennessee Div. of Archaeology) PRACTICAL USES AND APPLICATIONS OF THE VCR.

The camera has long been one of the most useful tools in field archaeology. Photography provides us with that last look at the past before it is erased by destruction from the science and usually the construction of progress. Foremost among those who emphasize the invaluable uses of the camera in the field is Mr. J. B. Graham. The skillful and critical operation of this tool is but one of many techniques which Mr. Graham has instilled in his beloved "lost children". Mr. Graham teaches not just skills and techniques, but more importantly, the basic underlying principles that govern them, thus allowing his students to continue to learn and grow and apply their learning to various situations and places. Through time, the building blocks of logic have brought about improvement of some techniques and even development of new skills, and yet, those basic principles have remained the same.

Such is the case with the video camera recorder. The basic principles that apply to photo documentation are still in effect, while the tool itself simply allows for an extension of dimension. The VCR will enable the field technician to enhance and supplement the documentation of the archaeological record by providing perspectives and interrelationships that were previously unobtainable. This paper will examine the wide range of uses and applications of the VCR, not only in the field, but for the whole of archaeology as well. In addition, the practical, economical, and logistical aspects will be considered. It is intended that the VCR should be used in conjunction with, and not as a substitution for, the conventional and established methods of documentation. (11/8, 9:40 AM)

Steen, Carl R. (S Carolina Institute of Anthropology & Archaeology) THE WESSINGTON HOUSE ASSEMBLAGE: DOMESTIC REDWARES IN A COASTAL NORTH CAROLINA CONTEXT.

An assemblage of pre-1765 redwares is described and discussed. These ceramics are thought to have originated in the Northeastern United States and thus are illustrative of intercoastal trade. Similar wares are frequently either misidentified or simply glossed over. It is hoped that this paper will serve to alert other researchers to their presence on southeastern sites, thus adding an interpretive element to site investigations. (11/6, 9:40 AM)

Steponaitis, Laurie Cameron (SUNY, Binghamton) CHANGING SETTLEMENT PATTERNS IN COASTAL MARYLAND, 4000 B.C. - A.D. 1600.

A regional survey conducted in the lower Patuxent drainage in eastern Maryland (near Chesapeake Bay) revealed extensive evidence of human occupation from Late Archaic to Late Woodland times. Analysis of these data indicate that a major shift in settlement patterns took place at about A.D. 200. This shift is reflected archaeologically by greater settlement size, increased differentiation of assemblages between environmental zones, and greater differentiation in the intensity with which different zones were used. The earlier (pre-A.D. 200) pattern suggests generalized

resource procurement and high residential mobility; the later (post-A.D. 200) pattern suggests logistically organized procurement and lower residential mobility. The causes of this change may have well been social rather than environmental. (11/7, 9:20 AM)

Steponaitis, Vincas P. (SUNY, Binghamton) THE UNIVERSITY OF ALABAMA EXCAVATIONS AT 1TU50, A MOUNDVILLE I PHASE CENTER IN THE BLACK WARRIOR VALLEY.

In the summer of 1975, the University of Alabama Field School, under the direction of Richard Krause, excavated a portion of 1TU50, a small mound-and-village complex located less than a kilometer north of Moundville. This work revealed that the site's only mound, now 3 m high, was built in at least two stages. Also uncovered was a rectangular, single-post structure with a prepared central hearth that had once stood on the original ground surface immediately south of the mound. Analysis of the ceramics suggests that the site dates to the early Moundville I phase, ca. A.D. 1000-1150, a time prior to Moundville's emergence as a major regional center. (11/7, 2:40 PM)

Stevenson, David R. (see Dye, D. H.)

Styles, Bonnie W. (Illinois State Museum) and James R. Purdue (Illinois State Museum) THE DETECTION OF HUMAN AND NONHUMAN ACCUMULATIONS OF BONE AT MODOC ROCK SHELTER.

Modoc Rock Shelter, Randolph Co., Illinois, contains bone-rich deposits dating from primarily 9000 to 4000 years B.P. Numerous remains from small-bodied vertebrates suggested that agents other than humans, e.g., owls, could have also been responsible for transporting bones to the shelter, thus confounding the interpretation of human subsistence. Fortunately, the deposits lend themselves to micro-stratigraphic analysis because many separate lenses, representing short-term episodes of fill, are clearly visible. For a series of strata, we contrasted the amount of cultural debris to the overall species composition. Modifications (e.g., burning, cut marks, and fracture) to bone were also considered and compared for strata with varying amounts of cultural debris. We used these data to evaluate the nonhuman contribution to the bone accumulation at Modoc Rock Shelter. (11/6, 3:40 PM)

Sussenbach, Tom (U Illinois) REDEFINING THE LATE WOODLAND CERAMIC ASSEMBLAGE IN THE NORTHERN LOWER ALLUVIAL VALLEY.

Recent survey and excavations in western Kentucky provide data on the Middle Woodland through Early Mississippian ceramic sequence. The Early Mississippian period ceramic assemblage is characterized by a continuation of grog-tempered cordmarked and plain ceramics, generally considered within the Baytown ceramic tradition. Late Woodland ceramics can be separated on the basis of several criteria from similarly tempered Mississippian ceramics. A reevaluation of Late Woodland settlement patterns and adaptations in the region must take place in light of the common inclusion of all grog-tempered ceramics within the Baytown tradition. Sites formerly assigned a Late Woodland component may in fact date to the Early Mississippian period. (11/6, 9:20 AM)

Thomas, David Hurst (American Museum of Natural History) A PRELIMINARY REPORT ON THE ARCHAEOLOGY OF MISSION SANTA CATALINA DE GUALE, GEORGIA.

Nearly a decade ago, the American Museum of Natural History began searching for the archaeological site of mission Santa Catalina de Guale, thought to exist on St. Catherines Island, Georgia. For most of the 17th century, Santa Catalina operated as Spain's northern boundary in eastern North America until the small fortified mission was overrun by British forces in 1680, signifying the beginning of the end for Spanish control of the eastern seaboard.

Remote sensing technology was employed in several ways at Santa Catalina: to locate the mission complex, to define the configuration of subsurface structures prior to excavation, and to build a baseline library of geophysical signatures to be projected against ground-truthed archaeological evidence. Preliminary proton magnetometer research turned up a Spanish period barrel well and two well-preserved wattle-and-daub buildings — the church (iglesia) and presumed kitchen cocina. Low altitude aerial photography defined a shell-covered forecourt (atrio) fronting the mission church.

Soil resistivity studies disclosed a third wattle-and-daub mission building — apparently the Franciscan friary (convento) — plus a series of contemporary aboriginal Guale structures (the pueblo). Subsequent ground-penetrating radar survey and low level aerial photography confirmed the presence of a western bastion and palisade trenches surrounding the central mission complex at Santa Catalina. Excavations also encountered an extensive Guale Indian cemetery beneath the church floor at Santa Catalina; roughly 400-450 Christian burials have been exhumed to date.

Six years of intensive field investigations have probed the interaction between the indigenous Guale Indians and the Franciscan mission system in Spanish Florida. The Guale were among the first indigenous peoples encountered by Europeans exploring north of Mexico, and they are the best known of the 16th and 17th century Muskogean peoples. Nevertheless, even basic issues of subsistence and social organization remain today the subject of controversy, largely because of the ambiguous ethnohistorical record. A primary objective at Santa Catalina has been to shed light on the Guale by addressing questions of ecological potential, economic change (particularly the relative importance of horticulture), degree of transhumance, relative health and status, and changes in population size among the protohistoric Guale. The skeletal sample also provides information regarding pathology, bone size modification, and the relationship of social status to resource access.

Excavations continue at Santa Catalina, and this paper reports only preliminary findings, emphasizing the potential of archaeological data in the resolution of heretofore largely ethnohistorical questions. (11/6, 2:00 PM)

Thorne, Robert M. (U Mississippi) MISSISSIPPI ARCHAEOLOGY AND THE FEDERAL ARCHAEOLOGY PROGRAM: OR WHY WE ARE BEGINNING TO KNOW WHAT WE THINK WE KNOW.

The State of Mississippi is divided into twelve physiographic regions characterized by a diversity of naturally occurring resources and archaeological defined cultures which were responsive to those resources. Federal agency responsibility for archaeological resource consideration is as diverse as the physiography with 5 Corps of Engineers

districts being represented, one National Forest Service Region, Conservation Service, and until recently, the Bureau of Land Management. Each has caused considerable funding to be made available during the last decade and the background archaeological data that has been produced has increased logarithmically. While the development of archaeological knowledge has benefitted directly, academic institutions have received considerable direct and indirect support from survey and excavation projects. Site conservation and stabilization projects have been initiated and successful efforts in this area will help to insure that archaeological resources are available for future scholars and the interested public. (11/6, 10:20 AM)

Trinkley, Michael (Chicora Foundation, Inc.) NON-SHELL LATE ARCHAIC-EARLY WOODLAND STALLINGS PHASE SITES: ADDITIONAL DATA ON SUBSISTENCE AND SETTLEMENT FROM THE SOUTHERN SOUTH CAROLINA COAST.

Research on the subsistence and settlement patterns exhibited by Late Archaic-Early Woodland Stallings phase sites has traditionally emphasized the more obvious shell middens and rings of the Savannah River drainage and Georgia-South Carolina coasts. Some have viewed Stallings sites which lack shell midden accumulations as evidencing limited occupation in marginal areas. Data from the Fish Haul site (38BU805) suggest that these non-shell midden sites may represent a significant segment of a diversified settlement system. Data are also presented on the Stallings diet as evidenced by floral and faunal samples recovered from 1/4 inch, 1/16 inch, and flotation techniques. (11/7, 10:20 AM)

Trubowitz, Neal L. (Indiana U-Purdue U at Indianapolis) THE SEARCH FOR THE 18TH CENTURY WEA: 1986 IUPUI FIELDWORK.

The Anthropology Department of Indiana University-Purdue University at Indianapolis (IUPUI) began a long range research program in 1986 designed to investigate the effects of European and Native American contact in the Lafayette-West Lafayette area of Tippecanoe County, Indiana. The Wabash River was the center for several different tribes in the 18th century, which attracted the French who established Fort Ouiatenon among the Indian villages. The 1986 field research undertook floodplain reconnaissance on the north and south sides of the river, successfully recording new historic site loci, and began test investigations of the largest known village, the Wea site 12T6. The tests, designed to provide data for a National Register of Historic Places eligibility determination, included intensive surface recovery, a proton magnetometer survey, and test excavations in one meter units. These investigations produced encouraging evidence of features surviving below the plowzone of the cultivated portion of the site, cultural debris buried over 80 cm below flood deposits in the overgrown portion of the site, and a wide range of artifacts of both European and Native American manufacture on the surface and in context along with well preserved faunal remains. (11/6, 11:40 AM)

Turnbow, Christopher A. THE MUIR SITE: AN UPLAND FORT ANCIENT VILLAGE IN CENTRAL KENTUCKY.

Excavations at the Muir Site in Jessamine County, Kentucky, produced data on a widely dispersed early Fort Ancient village. Dated from A.D. 980 to 1230, the site has yielded three semisubterranean structures and an artifact assemblage exhibiting both Late Woodland and Fort Ancient attributes. Situated in an upland setting far

away from any major bottomland, the site reflects early Fort Ancient adaptation to local environments in the Bluegrass Region. (11/7, 8:40 AM)

Wagner, Mark J. (American Resources Group) LATE WOODLAND COMMUNITY PATTERNS AT THE JAMESTOWN SITE (21C4-14).

The Jamestown site (21C4-14) is a large Late Woodland (A.D. 400-1000) community located in the upper reaches of the Galum Creek Valley in southern Illinois. Excavations revealed that over 500 pit features grouped in at least 14 clusters were distributed in a circular pattern around a central open area, the center of which was marked by two large posts. Two explanations for the circular site pattern are examined: (1) that the Jamestown site was a permanently occupied base camp with the feature clusters representing the locations of individual family groups in an organized circular community; and/or (2) that the feature clusters represent successive non-contemporaneous occupations that occur throughout the Late Woodland period. The circular site plan is formed as the result of occupations located around the site perimeter, but an actual circular community may not have been present. (11/6, 8:20 AM)

Walker, Karen Jo (U Florida) UTILIZATION OF ANIMAL FOOD RESOURCES IN THE CALUSA AREA.

Zooarchaeological analysis of shell midden samples from the Charlotte Harbor/Pine Island Sound area offers a significant contribution to the long term research goal of understanding cultural complexity in southwest Florida. Completed analyses of column samples dated A.D. 150 to 1350 from Cash Mound (8CH38), Josslyn Island (8LL32), and Buck Key (8LL55) represent three different environmental locales. Estimates of minimum and maximum meat weights based on allometric principles allow the relative comparison of vertebrate and invertebrate dietary components. Overall, the subsistence strategy is dominated by intensive fishing and shellfish collection, confirming earlier hypotheses. The analysis reveals changes in food resource targeting both chronologically and horizontally from site to site. (11/8, 8:20 AM)

Ward, H. Trawick (Research Labs. of Anthropology, U N Carolina) and R. P. Stephen Davis, Jr. (Research Labs. of Anthropology, U N Carolina) AN ARCHAEOLOGICAL INVESTIGATION OF CULTURE CHANGE AT A LATE SEVENTEENTH CENTURY INDIAN VILLAGE IN THE NORTH CAROLINA PIEDMONT.

Excavations at the Fredricks site in the north-central North Carolina Piedmont have uncovered the complete architectural plan of a late seventeenth century Occaneechi village. This research has revealed patterns of change and continuity in native Piedmont cultures as they adapted to contact with Euroamericans. Although significant changes can be seen in intrasite structure and mortuary behavior, subsistence activities appear to have maintained a surprising degree of continuity despite the incorporation of European tools and some domesticates. Pottery from the site, as well as mortuary patterns, further indicate a possible cultural connection with Iroquois groups to the north. (11/6, 4:00 PM)

Waselkov, Gregory A. (Auburn U) SEVENTEENTH CENTURY MIDDLEMAN TRADE IN THE INTERIOR SOUTHEAST.

Considerable archaeological and historical evidence is accumulating for the existence of widespread trade in European-made objects among the southeastern Indians during the seventeenth century. This trade apparently was carried to certain regions of the interior Southeast by Indian middlemen. The origins, extent, content, and mechanisms of this trade are discussed, and the repercussions on interior Indian cultures are considered from the viewpoint of the Tallapoosas and Alabamas of central Alabama. (11/6, 3:40 PM)

Wayne, Lucy B. (Water and Air Research, Inc.) SWIFT CREEK OCCUPATION IN THE ALTAMAHA DELTA.

Testing and excavation in Darien, Georgia identified a large multicomponent site on Cathead Creek as a Deptford/Swift Creek occupation. While Deptford sites are well documented on the Georgia coast, the Swift Creek occupation is less well known. At the present time, Swift Creek sites appear to be primarily confined to the delta areas of the Altamaha and Satilla Rivers. The Altamaha provides the major connection to the interior and Piedmont of Georgia where the Swift Creek culture was centered. The type site for Swift Creek is on the Ocmulgee River which flows into the Altamaha. It is believed that the coastal Swift Creek sites represent a migration of populations and/or material goods down river.

This paper will discuss the two Swift Creek sites identified in the Altamaha delta — the Evelyn Mound site on the south side of the river and the Cathead Creek site on the north side. Evelyn lies on a bluff overlooking the Altamaha marshes. The site encompasses mounds, borrow pits and a midden. No shell middens occurred on the site. The Cathead Creek site is located on a high bluff at the junction of Cathead Creek and the Darien River 3.5 miles across the Altamaha delta from Evelyn. The site includes an extensive shell midden adjacent to a spring, plus peripheral non-shell midden areas. Faunal evidence from the site indicates year-round occupation based on exploitation of estuarine and marsh resources, probably through the use of nets or traps. (11/8, 8:20 AM)

Webb, Paul A. (Southern Illinois U), Michael L. Hargrave (Southern Illinois U), and Charles R. Cobb (Southern Illinois U) THE DILLINGER COMPLEX OF SOUTHERN ILLINOIS: PHASE, STYLE ZONE, OR ADAPTATION?

The Dillinger complex is one of several contemporaneous Late Woodland manifestations in southern Illinois and adjacent portions of Missouri, Kentucky, and Indiana. Originally defined as a focus, it is generally treated as a phase identifiable solely by a few ceramic attributes. The paper explores our current understanding of Dillinger and considers whether this ceramic style zone represents a distinctive adaptation to the social or physical environment. By rethinking Dillinger in this way, we are better able to investigate the nature of variation within Late Woodland and the relationship of Dillinger to subsequent developments in the region. (11/6, 8:40 AM)

Wesler, Kit W. (Wickliffe Mounds Research Center, Murray State U) SALT-BOILING AND THE WICKLIFF FUNNEL IN WEST AFRICA.

Two long-standing and tenuously related problems in Mississippian period archaeology are the productivity of the salt-boiling industry and the function of the "Wickliffe

funnel" vessel form. Unexpectedly, a small project at Aivoji Estate-Ganyingbo Sea Beach in Lagos State, Nigeria, provides interesting comparative data. A test excavation reveals very dense accumulation of pottery, of a limited range of vessel forms. Experimental replication of salt-boiling under supervision of a Nigerian informant added insight into productivity of both salt and potsherds, and also demonstrated the use of ceramic vessels remarkably like the Wickliffe funnel as tripods to support the boiling vessel. These data encourage comparison with such sites as Muller's Great Salt Spring in Southern Illinois, and other sites with Mississippian "salt pans" and "funnels." (11/7, 9:20 AM)

Wetmore, Ruth Y. (see Goodyear, A. C.)

Whelan, James Patrick, Jr. (Coastal Environments, Inc.) A PROVISIONAL ALLOMETRIC-SCALING FORMULA FOR THE CLAM RANGIA CUNEATA (GRAY).

Shell middens present an important resource record of the historical interaction between man and the environment in coastal zones. Along the Gulf coast, one of the most important plecyopods found in shell middens is the brackish-water clam, Rangia cuneata (Gray). Since the early 1970s Rangia cuneata has been recognized as an important source of data for seasonality and dietary intake studies. During the analysis of prehistoric dietary information from several sites in the Trinity Bay drainage of southeast Texas, a provisional allometric-scaling formula for determining Rangia cuneata meat weights was developed. The proposed formula and its background development are discussed. The use of other methods for determining clam meat weights in the area are briefly reviewed. Some caveats and recommendations concerning the use of the formula are presented. (11/7, 3:00 PM)

Whyte, Thomas R. (U Tennessee) PITFALLS IN PREHISTORY: AN EXPERIMENTAL STUDY OF SMALL ANIMAL REMAINS IN ARCHAEOLOGICAL PIT FEATURES.

Small animal remains in archaeological pit features may represent both human food refuse and accidental live entrapments. A field experiment was conducted from May 1985 to June 1986 to identify criteria necessary for making this important distinction. The experiment involved 15 open and covered pits in an old field along the Tennessee River near Knoxville. Results indicate that remains of entrapped fauna can be distinguished from food refuse and can provide valuable clues concerning site vegetation, deposit formation, and occupation seasonality. Faunal remains from Woodland period features at the Addington site, Virginia Beach, Virginia are examined in light of this evidence. (11/6, 3:00 PM)

Widmer, Randolph J. (U Houston) CHIEFDOM DEVELOPMENT IN ABORIGINAL SOUTH FLORIDA.

At approximately A. D. 700 to 800, complex chiefdoms developed on the Southwest Florida coast. Unlike other parts of the Southeast, this sociocultural development is not based on intensive maize agriculture. Instead, intensive harvesting of highly productive coastal estuaries resulted in sedentary corporate groups with high population size and density. This, together with the highly variable nature of fishing by local groups which controlled fixed territories whose productivity varied with tides and fishing luck on a daily basis, necessitated centralized authority for



organizing the technology necessary to exploit these estuaries and the redistribution of the variable catch. (11/6, 1:00 PM)

Wilkie, Duncan C. (Southeast Missouri State U) TOWOSAHGY REVISITED: TEMPLE MOUND CENTER IN SOUTHEAST MISSOURI.

Originally, Towosahgy State Historic Site was called Beckwith's Fort as reported in the 1890's by the Smithsonian's mound survey of North America. The State of Missouri purchased the temple mound center in 1966 and now plans to develop it into an "outdoors museum". Excavations since 1967 will be briefly reviewed and some analysis of the artifacts offered. Methods for data management and inventory of documents and artifacts from over 8 years of archaeological excavations are being computerized. Lastly, a brief summary will be given on the 1986 testing of the southern portions of the park for future placement of buildings. (11/7, 9:40 AM)

Williams, Mark (LAMAR Institute and U Georgia) and Gary Shapiro (Florida Bureau of Archaeological Research and LAMAR Institute) SHOULDERBONE WAS A 14TH CENTURY FRONTIER TOWN.

As part of its continuing research on the Oconee valley Mississippian cultures, the LAMAR Institute mapped and tested the famous Shoulderbone site in Hancock County, Georgia. The work was conducted in co-operation with the summer 1986 UGA Archaeological Field School. Our work shows that the major site occupation was during the Savannah and Early Lamar Periods. Contrary to our expectation, Shoulderbone shows little evidence of occupation during the 16th century. This multiple mound site is located 13 km away from the Oconee River on a historically known trail. Its depopulation during the 15th century is coincident with the depopulation that occurred in the Savannah valley to the east. We believe that the Shoulderbone site's unusual location relates to interaction between the Oconee and Savannah valley populations initiated during the Savannah Period. (11/7, 3:00 PM)

Williams, Stephen (Harvard U) HAYWOOD, THRUSTON, AND OTHERS: PIONEERS IN TENNESSEE ARCHAEOLOGY — THEIR IMPACT TODAY.

A review of the findings of the major nineteenth century workers in the archaeology of central Tennessee including John Haywood, Joseph Jones, Frederic Ward Putnam and his Peabody associates, and Gates P. Thruston. Their elucidation of the Cumberland phase of Mississippian as known from the Nashville Basin will be discussed as well as Thruston's understanding of the overall cultural sequence of the region. The fable of the Tennessee pygmies will also be re-evaluated in light of present evidence. (11/6, 4:40 PM)

Wilson, Jack H. Jr. (N Carolina Dept. of Cultural Resources) VERTEGRATE FAUNA USEAGE AT A CAROLINA FREED SLAVE COMMUNITY.

The intensive program of test excavations conducted at the Freed Slave community of Mitchellville on Hilton Head Island, South Carolina has produced over 3000 vertebrate fauna remains. Standardized analysis of this collection, which includes the use of allometric formulae, documents a preponderance of domesticated mammals and fish in the diet of the former slaves at Mitchellville. Consideration of the spatial distribution of the remains shows some differences in the occurrence of the

vertebrate fauna through the site. The fauna usage pattern exhibited at Mitchellville also differs from such patterns documented for other sites from both small farm, plantation, and urban contexts in the Carolinas. Historical factors, such as the origin of Mitchellville as a refugee camp laid out and initially run by the military, are partly responsible for the differences noted. (11/6, 11:20 AM)

Wimberley, V. S. (see Sibley, L. R.)

Wing, Elizabeth S. (Florida State Museum) MODERN MIDDEN EXPERIMENT.

The faunal remains that a zooarcheologist has to work with, despite ever so careful excavation, is but a pale shadow of what was disposed of at the time the midden material accumulated. We know this intuitively. Modern experiments by Ian Walters with the loss of animal remains from site have documented the great degree of this loss. The experiment conducted by Walters was in Australia and provides some details to the early warning by Patricia Lyon about the destruction of animal remains by domestic dogs. Not only have losses been great, they have also been differential discriminating particularly against the smaller vertebrates. Based on studies of midden material from many coastal sites we know that many small vertebrates are preserved and thus we hypothesize that the shell in the middens offer some sort of protection to skeletal remains from scavengers. Very preliminary observations suggest that greater loss of vertebrate remains than invertebrate remains may be occurring and that a variety of scavengers other than dogs may be responsible. It is important to conduct experiments on such losses in order to better understand the significance of the prehistoric faunal assemblages from archeological shell mounds. (11/6, 4:40 PM)

Yarnell, W. Richard (see Mainfort, R. C.)