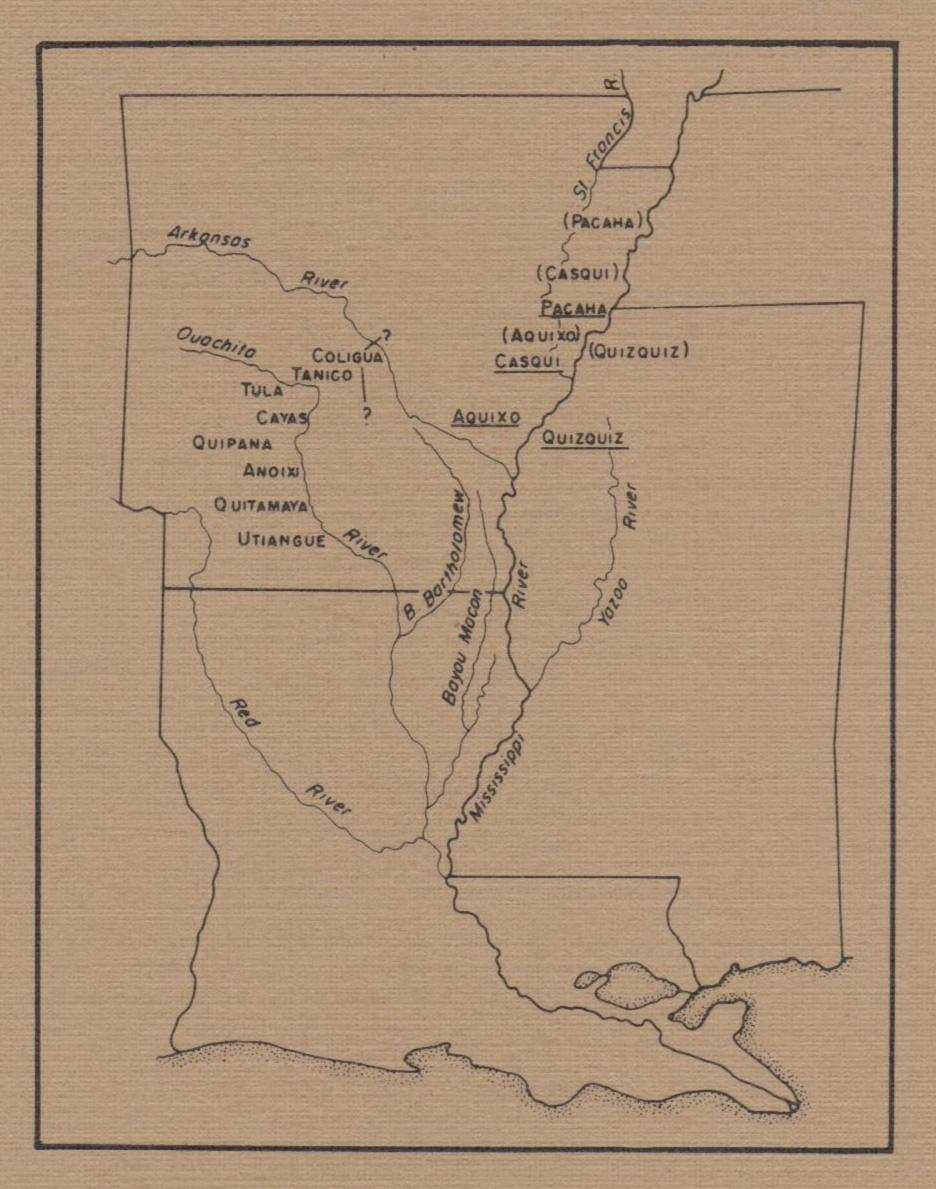
Archaeological Report No. 18



THE PROTOHISTORIC PERIOD IN THE MID-SOUTH: 1500-1700

PROCEEDINGS OF THE 1983 MID-SOUTH ARCHAEOLOGICAL CONFERENCE

edited

by

David H. Dye

and

Ronald C. Brister

Mississippi Department of Archives and History

Jackson, Mississippi

1986

Archaeological Report No. 18

THE PROTOHISTORIC PERIOD IN THE MID-SOUTH: 1500-1700

Proceedings of the 1983 Mid-South Archaeological Conference

Edited by

David H. Dye

and

Ronald C. Brister

MISSISSIPPI DEPARTMENT OF ARCHIVES AND HISTORY

Jackson

1986

MISSISSIPPI DEPARTMENT OF ARCHIVES AND HISTORY

Archaeological Report No. 18

Patricia Kay Galloway Series Editor

Elbert R. Hilliard Director

Cover drawing by Frieda Odell-Vereecken

Library of Congress Catalog Card Number 86-620009 ISBN: 0-938896-49-0

© Copyright 1986

Mississippi Department of Archives and History

TABLE OF CONTENTS

	Pa	ge
Ackno	owledgements	ii
Intro	oduction	
	David H. Dye	хi
Chapt	ter	
1	Corn and Other Plants from Prehistory into History in Eastern United States	
	Leonard W. Blake	3
2	The Direct Historical Approach and Early Historical Documents: The Ethnohistorian's View	
	Patricia K. Galloway	14
3	Protohistory of the Lower and Central Arkansas River Valley in Arkansas	
	Michael P. Hoffman	24
4	Tunicans West of the Mississippi: A Summary of Early Historic and Archaeological Evidence	
	Marvin D. Jeter	38
5	Protohistoric Settlement Patterns in Northeastern Mississippi	
	Jay K. Johnson and John T. Sparks	64
6	The Protohistoric Component at the Lyon's Bluff Site Complex, Oktibbeha County, Mississippi	
	Richard A. Marshall	83
7	Protohistoric Hunting Sites in Northeastern Arkansas	
	Dan F. Morse	89
8	Protohistoric Development in Central Alabama	
	Craig T. Sheldon, Jr. and Ned J. Jenkins	95

LIST OF FIGURES

		Page
1.1	Corn at archaeological sites prior to A.D. 1200	5
1.2	Corn at archaeological sites between A.D. 1200 and A.D. 1400	5
1.3	Corn at archaeological sites between A.D. 1400 and A.D. 1600	6
1.4	Corn at archaeological sites between A.D. 1600 and A.D. 1845	6
3.1	Protohistoric phases along the Arkansas River	26
3.2	Siouan subgroupings (From Hollow and Parks 1980:76)	31
4.1	"Provinces" and Indian groups contacted by De Soto in 1541-1542	40
4.2	Approximate locations of Indian groups contacted or recorded by Jolliet and Marquette in 1673, and by La Salle in 1682	. 43
4.3	Approximate locations of Indian groups contacted or recorded by Journal in 1687, Tonti in 1690 and 1693, and Bienville in 1700	. 44
4.4	"Close encounters of the Tunica kind": a chronological summary of approximate locations	46
4.5	"Close encounters of the Koroa kind": a chronological summary of approximate locations	47
4.6	Late Prehistoric, Protohistoric, and early Historic archaeological sites and phases	4 8
6.1	Lyon's Bluff site (22-0k-1), Oktibbeha County, Mississippi	83
8.1	Protohistoric development in central Alabama	97
8.2	Mississippian chronology and nomenclature	98

LIST OF PLATES

		Ρ	age
4.1	Winterville Incised vessels from Protohistoric sites in southeastern Arkansas		50
4.2	Bottles with punctations below lip (cf. "Tunica mode") from Protohistoric sites in southeastern Arkansas	•	51
4.3	Possibly very late variants of Winterville Incised from Protohistoric sites in southeastern Arkansas		53
4.4	Vessels from the Tillar Farms site (3-Dr-30), southeastern Arkansas with attributes suggesting "Natchezan" or other Late Protohistoric to Historic relationships	•	54
4.5	Vessels with attributes suggesting "northern" or Quapaw phase (Late Protohistoric to Historic) relationships, from sites in southeastern Arkansas	•	56
4.6	Vessels with attributes suggesting "Caddoan" relationships, and pipes, from Protohistoric sites in southeastern Arkansas		57

LIST OF TABLES

		Pa	age
1.1	Occurrence of Corn at Archaelogical Sites Prior to A.D. 1200	•	7
1.2	Corn at Archaeological Sites Between A.D. 1200 and A.D. 1400	•	8
1.3	Corn at Archaeological Sites Between A.D. 1400 and A.D. 1600	•	9
1.4	Corn at Archaeological Sites A.D. 1600 and A.D. 1845		10
3.1	University of Arkansas Museum Carden Bottoms Vessels by Type	•	29
5.1	Component Cross Tabulation		65
5.2	Physiographic Distribution of Components		66
5.3	Stream Order Distribution of Components		66
5.4	Soil Association Distribution of Components		67
5.5	Stream Flow Classification, Chuquatonchee and Line Creek Watersheds	•	69
5.6	Bottom Soil Texture Types		71
5.7	Bottom Soil Texture Class Breakdown for Chuquatonchee and Line Creek Reservoirs (acres)	•	71

ACKNOWLEDGEMENTS

The 1983 Mid-South Archaeological Conference was the result of the effort and support of a number of individuals and institutions. The editors would like to thank Douglas R. Noble, director of the Memphis Museum System, who contributed meeting and reception space and provided the refreshments for the morning and afternoon breaks. He generously supported the preparation of the conference proceedings for their eventual publication. Thomas W. Collins, Department of Anthropology Chair at Memphis State University, made office space available for the preparation of the report and encouraged our efforts in coordinating the meeting. Diane Curtis of the Museum coordinated the audio-visual equipment.

Mary Matthews, James Edwards, and Carl Wright, under the supervision of Jim Harbin, set up the reception and registration areas and provided coffee on Saturday. The Museum's staff helped make the program successful by taking care of numerous details prior to the meeting.

Patricia K. Galloway was kind enough to provide a publication outlet through the Mississippi Department of Archives and History for the conference proceedings. Her editorial comments are appreciated. We thank Elbert R. Hilliard, Director of the Mississippi Department of Archives and History, for his continued support in publishing the proceedings of the Mid-South Archaeological Conference. Mss. Phyllis Langford, Vivian Reddick, and Jeanne Tutor made our job of editing the manuscript much easier as a result of their skills at the Memphis State University Word Processing Center. Their patience is much appreciated. The map on the front cover was produced by Frieda Odell-Vereecken. Thanks are extended to Tom Foster of the Memphis State University, Center for Instructional Services and Research, Graphic Design and Development for preparing the volume cover. Patricia K. Galloway and Marvin D. Jeter commented on the introduction and shared their ideas with the senior editor on the Protohistoric period.

We would like to thank all of the participants and conference guests for their efforts in making the conference possible. The editors, of course, accept all responsibility for editorial errors and any shortcomings.

David H. Dye, Department of Anthropology, Memphis State University, Memphis, TN 38152 Ronald C. Brister, Memphis Pink Palace Museum, 3050 Central Avenue, Memphis, TN 38111

MEETING PROGRAM

THE FOURTH MID-SOUTH ARCHAEOLOGICAL CONFERENCE - 1983

MEMPHIS STATE UNIVERSITY MEMPHIS, TENNESSEE

June 11	
9:30	Leonard W. Blake (Washington University - St. Louis) CORN AND OTHER PLANTS FROM PREHISTORY INTO HISTORY IN EASTERN UNITED STATES
9:50	Patricia K. Galloway (Mississippi Department of Archives and History) PROTOHISTORIC EXTRAPOLATION FROM EARLY HISTORIC DOCUMENTS AND ARCHAEOLOGICAL EVIDENCE: THE ETHNOHISTORIAN'S VIEW
10:10	Michael P. Hoffman (University of Arkansas) PROTOHISTORY OF THE LOWER AND CENTRAL ARKANSAS RIVER VALLEY IN ARKANSAS
10:30	Marvin D. Jeter (Arkansas Archeological Survey) TUNICANS WEST OF THE MISSISSIPPI: A SUMMARY OF EARLY HISTORIC AND ARCHAEOLOGICAL EVIDENCE
10:50	Coffee Break
11:00	R. Barry Lewis (University of Illinois at Urbana-Champaign) ASTRAGALI DICE: EARLY 16TH CENTURY HORIZON MARKERS IN THE MID-SOUTH
11:20	Richard A. Marshall (Mississippi Sate University) THE PROTOHISTORIC COMPONENT AT THE LYON'S BLUFF SITE COMPLEX, OKTIBBEHA COUNTY, MISSISSIPPI
11:40	Lunch
1:30	Dan F. Morse (Arkansas Archeological Survey) HUNTING ACTIVITY IN THE NODEAN PHASE
1:50	James E. Price (Southwestern Missouri State University) THE PROTOHISTORIC PERIOD IN SOUTHEASTERN MISSOURI
2:10	Craig T. Sheldon, Jr. (Auburn University) and Ned J. Jenkins (Auburn University) PROTOHISTORIC DEVELOPMENT IN CENTRAL ALABAMA
2:30	John D. Stubbs, Jr. (Chickasaw Archaeological Survey, Harvard University) ARCHAEOLOGICAL SURVEY IN LEE COUNTY, MISSISSIPPI

2:50	Christopher S. Peebles DISCUSSANT	(Northwestern University)
3:15	Open Discussion	
3:45	Business Meeting	
4:00	Reception	

ABSTRACTS OF PAPERS NOT INCLUDED IN THIS PUBLICATION

R. Barry Lewis (University of Illinois at Urbana-Champaign)
ASTRAGALI DICE: EARLY 16TH CENTURY HORIZON MARKERS IN THE MID-SOUTH

The Astragali die is a rather insignificant looking artifact. Nevertheless, it is a horizon marker for the early sixteenth century in a limited portion of the Mid-South. It also was one component of an aboriginal game for children and may have been introduced into the region by members of one of the Spanish entradas of that era.

John D. Stubbs, Jr. (Chickasaw Archaeological Survey) ARCHAEOLOGICAL SURVEY IN LEE COUNTY, MISSISSIPPI

A comprehensive archaeological survey has been conducted during the past two years in Lee County, Mississippi. Emphasis has been placed on the survey of historic Chickasaw sites, but other sites have been located and surveyed through the use of a ten percent stratified random sample of the county. This paper presents the preliminary results of the survey as of May 1983. Its main focus is a description of Chickasaw settlement patterns and material culture. The survey strategy and some of the historic sources that have aided the survey also are discussed.

INTRODUCTION

The idea for organizing the fourth annual meeting of the Mid-South Archaeological Conference around the topic of the Protohistoric period began at the 1982 Mid-South Archaeological Conference. At this time the decision was made to hold the following meeting in Memphis and to focus the conference on the period between 1500 and 1700, when Mid-Southern Mississippian cultures underwent a profound transformation from the pristine and complex chiefdoms that have been verified archaeologically and documented ethnohistorically by the De Soto entrada and became the less complex societies recorded by the French and English in the late seventeenth century. The conference organizers decided to emphasize and document the transition of archaeologically defined cultures in the late prehistoric period as they became transformed into those cultures witnessed by the mid-seventeenth century French explorations in the Mid-South. Papers were solicited that would touch upon a variety of aspects dealing with the Protohistoric period, but would conform to the overall conference theme. The conference papers, and specifically those that were submitted for publication, reflect the diversity of interests among Mid-Southern archaeologists and ethnohistorians on the nature of cultural adaptation and culture change in the Protohistoric period. We hoped that the outcome of the meeting would result in a publication smaller in scope but similar to Wilcox and Masse's The Protohisotoric Period in the North American Southwest, A.D. 1450-1700 (Arizona State University, Anthropological Research Papers No. 24, 1981). By focusing concern on the Protohistoric period in the Mid-South we hoped to draw attention to a number of research interests and thus provide a stimulus for future studies.

The native and European cultural interaction in the Mid-South during the Protohistoric period is not well understood at this time, but it is possible to subdivide the Protohistoric period into three chronological divisions and two horizons based on the current archaeological and ethnohistorical data. The Early Protohistoric period (1500-1540), that time between initial European contact in the New World and the first ethnohistorically recorded accounts of native cultures in the Mid-South, represents a transition during which the Southeastern Indians experienced population and social disruption as a result of their exposure to Old World cultural and biological systems. During this period the initial waves of European diseases began to change the demographic balance and the circulation of European trade goods began to cause changes in the technological and status systems.

Some highly specific artifacts representative of this period have been designated as the Markala horizon (1540-1650) by Williams (Southeastern Archaeological Conference Bulletin 22:105-110, 1980). These include engraved marine shell buttons and plain eagle/falcon embossed copper plates. Additional Protohistoric traits, which may not be as widespread as the Markala horizon artifacts, include catlinite "Siouan" disk pipes, snub-nosed scrapers, urn burials, Nodena arrowpoints, and several ceramic vessel types such as gadrooned and "jar-necked" water bottles, punctated jars with appliqued strips, bowls with arcaded handles, and teapots.

The De Soto horizon (1540-1543) begins with the first European contact in the Mid-South in mid-December of 1540 when the De Soto entrada crossed the River of the Chickasaw and entered the Chickasaw homeland in northeastern Mississippi. For three and a half years the army travelled through the Mid-South until they began their descent down the Mississippi River in early July of 1543. The Spanish army spent approximately 50 months in the Southeast, beginning with their landing on the Florida coast in late May of 1539 and ending when they reached the mouth of the Mississippi River in late July of 1543. During this time almost 32 months or approximately 65% of their time in the Southeast was spent in the Mid-South. While specific locations of the route are debatable, and will continue to be discussed because of the inexact nature of the accounts, the general configuration of the entrada's movements is well documented. The De Soto accounts and artifacts provide an important anthropological baseline for studies of the initial European presence in the Mid-South.

Between 1543 and 1673 many of the Indian cultures in the Mid-South underwent substantial social and demographic change, particularly on the expansive Mississippi River floodplain, where dense populations could be supported in large villages and thus would be vulnerable to a collapse of the cultural system through European contact. The full extent of the cultural change during this period has not yet been fully evaluated, but both the archaeological and ethnohistorical record suggests that this was a transition period during which population movement, depopulation, and cultural reorganization and assimilation took place. Several native groups, such as the Chickasaw and Quapaw, did survive the effects of the De Soto entrada and continued into the Late Protohistoric and Historic periods as important and significant European allies, while other groups, such as the Chakchiuma and Koroa were reduced to small remnant populations either confederated or allied with stronger and more dominant cultural groups or failed to adapt to the changing social environment and eventually became extinct. Thus, during the 130 years of the Middle Protohistoric "dark ages," between 1543 and 1673, some of the Mid-Southern cultures underwent dramatic change, while others may have experienced only slight stress.

The native cultures recorded in the ethnohistorical documents from the Late Protohistoric period, 1673-1700, became the focus of increasingly continued European involvement in the New World. detailed documentation of these indigenous cultures commences with the French travels through the Mid-South on the Mississippi River. Beginning with the initial exploratory voyages by Father Jacques Marquette and Louis Jolliet in the summer of 1673 and Rene-Robert Cavelier de La Salle in the spring of 1682, the establishment of a trading post at the mouth of the Arkansas River among the Quapaw by Henry Tonti in January of 1686, the missionizing efforts of the Jesuits in the Lower Mississippi Valley by Francois de Montigny and Albert Davion in January 1699, and the establishment of a settlement at Biloxi by Iberville in May of 1699, the aboriginal populations of the Mid-South were brought into the European world system on a permanent basis. The French presence in the Mid-South continued until the Treaty of Paris was signed in 1763, giving control of the Mississippi Valley to the Spanish and English. English presence in the Mid-South is documented as early as 1698 with Captain Thomas Welch's party travelling from South Carolina across northern Mississippi to trade with the Chickasaw and on to the

Quapaw villages at the mouth of the Arkansas River. In February of 1700 Jean Couture led an English trading party west into the Quapaw country. European entrepreneurs such as these engaged the Chickasaw and Quapaw as trading partners with the English settlement in Charleston.

Several basic problems beset Protohistoric period research. In addition to the lack of specific, well-documented chronological controls for the archaeological data for this short time period, the lack of ethnohistorical documentation, specifically in the Late Protohistoric period when Europeans are known to be in the area, is particularly disappointing. While the continued presence of the French in the Mid-South is represented by missionaries and administrators travelling between Canada and Louisiana, the English were involved in illegal slave raids and trading expeditions. As a result of the transient nature of the French and the illegal activities of the English, published references on native cultures in the Mid-South are virtually lacking until the early eighteenth century, when the presence of both European powers became more permanent and established.

Another problem in Protohistoric studies in the Mid-South is the sampling bias inherent in the ethnohistorical documentation. While the De Soto narratives lack detailed information, they do contain a listing of various cultural groups located along the overland and Mississippi River routes. Such a large military group would have attracted the hostile attention of virtually all groups along its route and thus would have become documented in the European accounts. The De Soto horizon (1540-1543) is relatively well documented in terms of group location, although a great many of the details are lacking. In the Middle Protohistoric period, the Protohistoric "dark ages," adjustments were made in the cultural systems now out of balance from the passage of the De Soto expedition through the Mid-South and the European presence in other areas of the Southeast and Southwest, but there are no ethnohistorical and few archaeological records. By the Late Protohistoric period (1673-1700) the equilibrium of the cultural systems has been reestablished or at least adjusted, and more complete documentation is registered for these groups as they appear in the historic period.

The nature of the sampling bias becomes apparent when the structure of the various expeditions is examined. While the large military force of the De Soto expedition attracted the attention of the resident native populations, who were consequently brought to the attention of the Spanish, the small unobtrusive parties of French explorers and missionaries travelling on the Mississippi River would have attracted only slight attention to themselves and would have noticed only what was located along the immediate banks of the Mississippi River. Therefore, both the Marquette and Jolliet and La Salle expeditions, being relatively small and not engaging the local populations in warfare, may not have been aware of small populations residing on nearby meander lakes and rivers where the De Soto expedition found many of the larger villages and settlements. During this Late Protohistoric period the English do not seem to have penetrated beyond the Quapaw villages into the Arkansas interior. Even when the English visited the Chickasaw and Quapaw in the late seventeenth century and early eighteenth century few records resulted. Remnant groups may have existed for some time in various areas of the Mid-South. Such groups would be difficult to identify as they would be represented

archaeologically by artifacts and cultural patterns typical of small Late Mississippian and early historic populations lacking European trade goods.

Defining additional chronological markers, identifying the range and distribution of Protohistoric period settlements and population centers, and developing and operationalizing anthropologically relevant research strategies is a primary objective for understanding and explaining the cultural evolution and development of the human populations that inhabited the Mid-South during the Protohistoric period. This volume is an attempt toward continuing such studies.

THE PROTOHISTORIC PERIOD IN THE MID-SOUTH: 1500-1700

PROCEEDINGS OF THE 1983 MID-SOUTH ARCHAEOLOGICAL CONFERENCE

		*

CHAPTER 1

CORN AND OTHER PLANTS FROM PREHISTORY INTO HISTORY IN EASTERN UNITED STATES

Leonard W. Blake

The principal races of corn in the eastern United States before European contact are characterized by differing average numbers of rows of grains. The earliest had 12 or 14; an intermediate race had 10 or 12; and the latest usually had eight. As the low-row numbered race eventually became dominant, with some exceptions, it is possible to chart change by plotting mean row numbers of numerous collections of corn, for which there are dates, on maps of sequential time periods. In the seventeenth century a many-rowed dented race out of Mexico was added to the races, influencing the average row number of collections.

Corn from over 400 sites east of the Rockies has been sent to the Missouri Botanical Garden and more recently to Washington University for identification and analysis. These sites range in time from around 340 B.C. to about A.D. 1845, according to information furnished by the senders. Most of the specimens are from sites dating after A.D. 1000. With information on location and approximate date, it has been possible to produce generalized maps, by time intervals, demonstrating changes in the kinds of corn grown by Indians through time and space in the eastern United States.

The earliest corn that we have seen east of the Rockies has an ear with usually 12 or 14 rows of grains. This was called "Tropical Flint" by Anderson and Cutler (1942), and more recently, "North American Pop." A modified form of this, "Midwestern Twelve Row" (Cutler and Blake 1976), is dominant in most collections from Cahokia, southeastern Missouri, western Tennessee, northeastern Arkansas, and the Caddoan sites in southwestern Arkansas, Oklahoma, and eastern Texas. Such sites include Chucalissa (40-Sy-1), Upper Nodena (3-Ms-4), Adair (3-Ga-1), Standridge (3-Mn-53), and Roland Clark (eastern Texas), to name a few. Midwestern Twelve Row is similar to the race of corn formerly grown by the Pima and Papago in the Southwest.

A well developed form of another race, predominantly eight-rowed, was present before A.D. 1000 in some of the northeastern states. A modified form appeared in the Southeast with slightly higher average row numbers. This race was called "Northern Flint" by Brown and Anderson (1947). It has recently been designated "Eastern Eight Row" (Cutler and Blake 1976), a term more fitting in view of the nature of the ear and the race's history. This race became dominant over most of the northern half of the country early in the historic period.

Most of the corn that we have seen from the Mississippi Valley has consisted of these three races (North American Pop, Midwestern Twelve Row, and Eastern Eight Row). If the average row number of a collection from a site is low, say under ten, it is probably made up largely of

Leonard W. Blake, Box 1114, Department of Anthropology, Washington University, St. Louis, MO 63130

Eastern Eight Row. If high, say ten or over, and the collection dates before the late 1600s, it is probably made up largely of the older races or has been influenced substantially by them.

We have arbitrarily taken four time intervals, before A.D. 1200, A.D. 1200-A.D. 1400, A.D. 1400-1600, and 1600-1845, and using a map of eastern United States for each period, have noted the location of each site from which we have an estimated date and at least ten, but usually 20 or more cobs. Using symbols of open circles for average row numbers of eight to nine, closed circles for nine to ten, and open and closed triangles and stars for higher average row numbers, it has been possible to indicate changes in average row numbers and, consequently, to give some idea of the changes in racial composition through time of corn grown east of the Rockies from before A.D. 1200 to about 1845.

Sites to the east dated before A.D. 1200 (Figure 1.1; Table 1.1), generally speaking, have low row numbers, as indicated by open or closed circles. Those near the Mississippi and westward have higher average row numbers, as indicated by triangles and star symbols.

For the period of A.D. 1200 to A.D. 1400 (Figure 1.2; Table 1.2) there are a few more low row numbered sites near the Mississippi. For A.D. 1400 to 1600 they still continue in the East and have begun to appear on the Upper Missouri, while the high row numbered ones continue immediately to the south and west of the Mississippi-Ohio junction (Figure 1.3; Table 1.3). Occupation of a few of these continued beyond A.D. 1600.

Low row numbered sites are dominant nearly everywhere from 1600 to 1845 with few exceptions (Figure 1.4; Table 1.4). The old forms still hang on near the edge of the Southwest in Kansas and New Mexico. Collections from a site in Alabama at Horseshoe Bend and one from a Spanish Mission in San Antonio, Texas have average row numbers of 12.4 and 14.5, respectively, as indicated by stars on the map. Both date from the late eighteenth century and both contain examples of Mexican dent corn with many rows of grains, which became the traditional corn of the southern farmer and one of the ancestors of our modern corn belt dents (Anderson and Brown 1952).

There is an historical reference that indicates that dent corn was being grown in Virginia before 1679. In that year, John Banister, an English clergyman, wrote that "she corn," that is, dent corn, was being grown there (Ewan and Ewan 1970:140). He was quoted by Beverley in 1705, without acknowledgement, and this reference is the one best known and quoted (Beverley 1947:144).

We are not only interested in when and where dent corn reached the eastern United States, but also when and where it was first grown there. Dent corn appeared in Fremont sites in the western part of the Southwest around A.D. 1200, but it does not appear to have reached the eastern Pueblos until the return of the Spanish after the Pueblo revolt in 1692. The 1679 date, mentioned above, points to introduction and acclimatization of dent corn in the Southeast before the Pueblo revolt, which began in 1680.

Dent corn was brought into the Southeast much earlier than 1679 because historical records (Geiger 1937:7; Lyon 1976:179) indicate that corn was imported from Mexico from the begining of Spanish settlement on the Southeast coast. There is now archaeological evidence of Mexican dent corn from Santa Elena (38-Bu-162A), a Spanish settlement of 1566

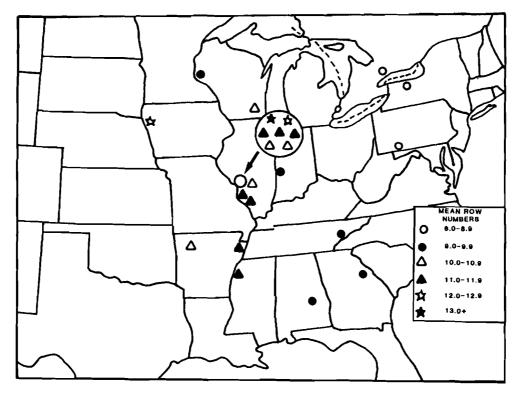


Figure 1.1. Corn at archaeological sites prior to A.D. 1200.

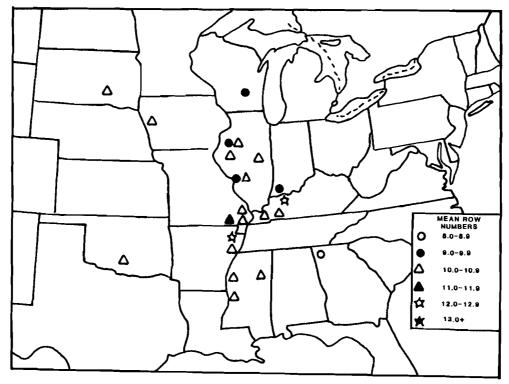


Figure 1.2. Corn at archaeological sites between A.D. 1200 and A.D. 1400.

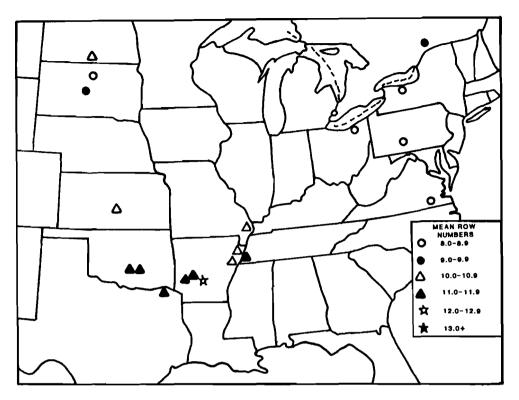


Figure 1.3. Corn at archaeological sites between A.D. 1400 and 1600.

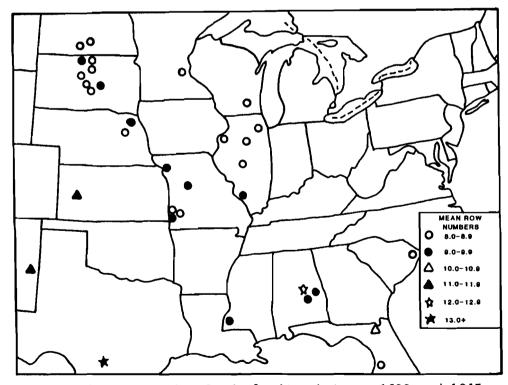


Figure 1.4. Corn at archaeological sites between 1600 and 1845.

Table 1.1. Occurrence of Corn at Archaeological Sites Prior to A.D. 1200.

STATE	SITE	CULTURE	APPROXIMATE DATE	MEAN ROW NUMBER	NUMBER OF COBS
Alabama Arkansas	1-Ei-52 3-Nw-31	Late Middle Woodland Late Woodland	Before A.D. 920 A.D. 1000+	9.5	13
Arkansas	Zebree (3-Ms-20)	Early Mississippian	A.D. 900-T100	11.9	18
Florida	Patton Seslie (8-Wa-39)		A.D. 1000-1300	10.6	55
Georgia	Lingerfeld (9-Wd-1)	Late Woodland	A.D. 900-1100	9.7	121
Illinois	Divers (11-Mo-28)	Late Woodland and	A.D. 800-1000	11.7	36
		Mississippian			
Illinois	Kane (11-Ms-194)	Late Woodland		12.2	8
Illinois	Merrell (11-Ms-2-3)	Mississippian	A.D. 900-1050	13.0	15
Illinois	Marty Coolidge (21-Ci-18)	Mississippian	A.D. 1000	10.9	28
Ill inois	Pit under Md 51 (S-34-2)	Mississippian		11.6	66
	Mansker (24-A2-8)	Mississippian	A.D. 1010+	11.2	36
	Texas No.1 (21-B3-6)	Mississipplan	4	10.0	112
	Loyd (11-Ms-74)	Mississippian	A.D. 1150-1250	11.1	63
	Top of Monk's Md. (Cahokia)	Mississippian	A.D. 1110+150	10.4	10
Illinois	Under Md 34 (Cahokia)	Mississippian	_	11.9	27
Indiana	Farrand (12-Vi-64)	Late Woodland	_	9.6	53
Iowa	Broken Kettle West (13-Pm-25)	Great Oasis	\Rightarrow	12.9	27
Mississippi	Hays (22-Co-612)	Mississippian	A.D. 1000-1200	11.6	14
New York	Sackett, (Ontario Co.)	Owasco		8.2	22
Pennsylvania	Gnagy (36-So-55)	Late Woodland,	(C14) A.D. 880-1070	8.4	51
Tennessee	Rankin (40-Ck-6)	monoganera Early Woodland	No date available	9.1	16
Wisconsin	Carcajou Point (47-Je-2)	Oneota	Ca. A.D. 1000	10.7	8
Wisconsin	Diamond Bluff (47-Pi-2)	Late Woodland, Oneota	A.D. 1150+150	7.6	36
CANADA		or middie miss.			
Ontario	DeWaele (AfHd-1)	Glen Meyer, Early Ontario Iroquoian	A.D. 1050 <u>+</u> 90	8.9	52

Table 1.2. Corn at Archaeological Sites Between A.D. 1200 and A.D. 1400.

STATE	SITE	CULTURE	APPROXIMATE DATE	MEAN ROW NUMBER	NUMBER OF COBS
Arkansas	Banks (3-Ct-13)		-	11.0	51
Arkansas	MCDUTTIE (3-CG-ZI)	Mississippian		12.0	93
ueorgia Illinois	Etowan, Mound. 'C' Merrell (11-Ms-2-3)	Mississippian Moorehead & Sand Drairie	A.U. 1030-1400 ie	δ 4.	94
2		Phases, Mississipplan	A.D. 1250-1500	9.4	118
Illinois	Jasper Newman (11-Ks-4)	Mississippian	_	10.5	13
Ill inois	Larson (11-Fv-1109)	Mississippian	_	10.7	17
Illinois	Cedar Row (Fulton Co.)	Mississippian	A.D. 1300 +	9.5	14
Illinois	Orendorf (11-Fv-1284)	Larson Phase	i		
		Mississippian	A.D. 1100-1300	10.1	20
Ill inois	01 in (11-Ms-277)	Mississippian	A.D. 1140-1400	10.1	52
Indiana	Angel Mounds	Mississippian	A.D. 1300-1500	9.6	26
Iowa	Kimball (13-Pm-4)	Mill Creek,			
		Mississippian	A.D. 1100-1400	10.5	16
Kentucky	15-Ly-18a	Mississippian	After A.D. 1300	10.2	12
Kentucky	15-Ch-2	Mississippian		10.8	22
Kentucky	15-Mi-4	Mississippian	After A.D. 1300	12.5	20
Mississippi	Powell Bayou (22-Su-516)	Mississippian	Est. A.D. 1200-1400	10.5	31
Mississippi	Lyons Bluff (22-0k-1)	Mississippian	A.D. 1200-1500	10.8	78
Mississippi	Pocahontas Md. (22-Hi-500)	Plaquemine			
		Mississippian	A.D. 1200-1400	10.0	32
Missouri	Crosno (23-Mi-1)	Mississippian	A.D. 1200-1400	10.1	18
Missouri	Turner-Snodgrass (23-Bu-21)	Mississippian	A.D.1300	11.0	51
Missouri	Towosahgy (23-Mi-2)	Mississippian	A.D. 1200-1300)	10.8	75
Oklahoma	Lee (Garvin Co.)	Washita River Focus	A.D. 1200-1300	10.6	65
South Dakota	Crow Creek (39-Bf-11)	Campbell Creek Focus	A.D. 1400	10.1	9/
Wisconsin	Walker-Hooper (47-Gi-65)	Grand River Focus,			
		Aberant Oneota	A.D. 1200-1250	6.6	19

Table 1.3. Corn at Archaeological Sites Between A.D. 1400 and 1600.

Table 1.3.	Table 1.3. Corn at Archaeological Sites Bet	Sites Between A.D. 1400 and 1600.			
! !				MEAN	NUMBER
STAIL	SITE	CULTURE	APPROXIMAIE DAIE	ROW NUMBER	OF COBS
Arkansas		Miss.	A.D. 1400-1700	10.1	20
Arkansas	Upper Noderia (3-MS-4)	se, Miss.	A.D. 1400-1/00		76
Arkansas	Adalr (3-Ga-1)		Est. A.D.1400-160		
Arkansas	Hedges (3-Hs-60)	Mid-Ouachita Phase Caddo	Est. A.D. 1300-1450		56
Arkansas	Standridge (3-Mn-53)	Buckville Phase Caddo	A.D. 1300-1450	11.1	33
Kansas	Tobias (14-Rc-8)	Great Bend Aspect,		·	Ç
		83 - 3 - 5		10./	₹
Missouri	Callahan-Thompson (23-Mi-71)	Mississippian	A.D. 1400-1600	10.8	22
New York	Alhart (Monroe Co.)	Prehistoric Iroquois		8.1	14
North Dakota	a Shermer (32-Em-10)	Terminal Horizon Middle Missouri Tradition	A.D.	10.0	20
Ohio	South Park (Cuyahoga Co)	Whittlesley Focus	A.D. 1500+	8.3	123
Oklahoma	34-Hs-24	Ft. Coffee Focus,		•	i.
		r di coli Aspec c	A.D. 1500-1600	11.6	CI
Oklahoma 		Washita River Focus	A.D. 1350-1550	11.7	12
Pennsyl vania	a Sheep Rock	Shenk's Ferry & Susquehanock	A n 1550+	α	1714
40100 440			7.001		17.7
South Dakota	a Lakocne (39-31-9) a Hosterman (39-Po-7)	Component uncertain LeCompte Focus	ESt. A.U. 1450-1695		57
_	(4)	Chou ceau Aspec c	Est. A.D. 1550+		
lennessee	cnucallssa (40-5y-1)	walis Phase, Mississippian	A.D. 1500-1600	11.7	257
Texas	Roland Clark (Red River Co.)	Caddo Dorhang Nottanay	A.D. 1350-1650	11.1	172
g = - - - -		Indians	A.D. 1500-1620	8.9	110
CANADA					
Ontario	McIvor (BfFu-1)	Prehistoric Onondaga	A.D. 1500	0.6	37

Table 1.4. Corn at Archaeological Sites Between 1600 and 1845.

lable 1.4.	corn at Archaeological Sites betw	oltes between 1000 and 1040.		MEAN	NUMBER
STATE	SITE	CULTURE	APPROXIMATE DATE	ROW NUMBER	OF COBS
Alabama	Nuyaka Village Horseshoe Bend N.P.	Historic Upper Creek	A.D. 1777-1813	12.4	28
Alabama	Talisi (1-Mc-1)	Historic Creek		9.2	17
Alabama		Historic Yuchi		0.6	52
Florida	Spanish Mission (8-Su-65)	Utina Indian		က ့ ထ	194
Florida	Zetrouer (8-A-67)	Spanish-Indian Ranch		10.3	112
Georgia		Spanish Mission		æ. 8	50
Illinois	Zimmerman (11-Ls-13)	Kaskaskia		9. 8	22
Illinois	Palos (11-Ck-26)	Upper Mississippian		8.9	21
Illinois	Waterman (11-R-122)	Michigamea		9.5	421
Illinois	Rhoads (11-Lo-8)	Historic Kickapoo	A.D. 1760-1820	8.4	262
Illinois		Historic Sauk	A.D. 1790-1810	8.3	1300
Kansas	El Quartelejo	Plains Apache or			
		Pueblo Refugees	A.D. 1700	10.6	14
Minnesota	Ft. Renville	American Fort	A.D. 1825-1846	8.2	11
Mississippi	Grand Natchez Village	Protohistoric and Historic Natchez	A.D. 1600-1700+	9.4	21
Missouri	King Hill (23-Bn-1)	Late Oneota, Kansa?	A.D. 1700	8.6	742
M1ssour1	Utz (23-5a-2)	Late Uneota Historic Missouri	A.D. 1600-1714	7 0	99
Missouri	Brown (23-Ve-3)	Historic Osage	A.D. 1675-1775	9.6	15
Missouri	Carrington (23-Ve-1)			8.9	69
Missouri	Hayes (23-Ve-4)	Little		8.9	328
Nebraska	(25-St-1)			0.6	16
New Mexico	Gran Quivira	Peripheral Anasazi		11.1	1309
North Dakota	Boley (32-Mo-37)	Protohistoric Mandan			
		Abandoned		8.4	17
North Dakota	Double Ditch (32-81-8)		A.D. 1700-1725	8.1	53
	Demary (39-Co-1)			9.5	$\frac{123}{23}$
	Spiry-EKIO (39-WW-3)			æ.	68 S
	Bamble (39-Ca-6)	Protohistoric Arikara		۳° ه	37
		Late Arikara		æ.3	20
	Ft. George Village (39-St-17)	Protohistoric Arikara	18th Century	9.0	6 5
South Dakota	Musn Creek (39-Hu-5) Dhillin Banch (30 C+ 14)	Probably Arikara Dectobistoric Arikana	Istn century	9.0 7.0	7 5
		Cosbuiltors Indiana		7.01	17
Wisconsin	Crabapple Point (47-Je-93)	Historic Winnebado		 8.3	30 211
	-		,	•	1 {

to 1587 in what is now South Carolina. A large carbonized central portion of an ear of corn has been identified as dent corn similar to the <u>Conico elote</u> race of central Mexico (Cutler 1980). Because corn was being brought from Yucatan by way of Havana at the time of occuption (South 1980:17), and because all other recovered corn is of races known from prehistoric sites, the dent ear may have been imported and not grown on the site. Corn's sensitivity to day length could have hindered attempts to mature corn imported from lower latitudes, but if attempts persisted, they should have succeeded at last.

Kohler (1979) made a study of corn cob impressions on pottery from north central Florida which indicated an increase in kernel size beginning about 1600. He has suggested that this possibly might be due to introgression of dented Mexican races such as Tuxpeno, which has 12 to 16 rows of kernels. In the few collections that we have seen from early historic sites in the Southeast any possible mixing of Mexican corn was not sufficient to raise the average row number until somewhat later than 1600. One hundred and ninety four cobs from a Spanish mission (8-Su-65) dating between 1581 and 1610 had a mean row number of 8.3, and another 20 cobs from a mission in Georgia (9-Lb-8) (1590-1670) had a mean row number of 8.8. There were only four 12-rowed cobs in corn from Site 8-Su-65 and no 14 or 16-rowed cobs in either of these collections. One hundred and twelve cobs from the Zetrouer site (8-A-67), a Spanish ranch dated 1685 to 1706, were received from Jerald T. Milanich. This collection had a mean row number of 10.3 and included 29 12-rowed, two 14-rowed and one 16-rowed cob. It is suspected that the corn from the ranch may contain some admixture of many-rowed Mexican dent corn. We need more corn from early Historic sites to pin down the introduction and acclimatization of this important kind of corn.

It should be mentioned that we have seen 21 cobs from the historic Natchez site from Feature 372, which we were told is dated at approximately 1582. The collection has a mean row number of 9.4 and no cobs with more than 12 rows of grains. The corn is a southern variety of Eastern Eight Row.

Remains of two Old World plants should be useful in indicating European influence. These are watermelon (<u>Citrullus lanatus</u>) and peach (<u>Prunus persica</u>); both were introduced early. Watermelons were grown by the Spanish on Santa Elena Island as early as 1576 (Connor 1925:159) and 23 years later they were found growing 50 leagues inland in what is now Georgia (Serrano y Sans 1912:144). When the French first reached the Natchez those Indians had peaches and watermelons and even had a "watermelon moon" (Le Page du Pratz 1975:338). Our research indicates that by about 1700 watermelons were grown from the Gulf of Mexico to Canada and from the east coast to California (Blake 1981:194).

We have not yet seen any watermelon seeds from the Mid-South, although we have seen some from the Zimmerman site (11-Ls-13) in Illinois which, it is believed, was visited by Marquette, and from two sites in Missouri which date in the late seventeenth and early eighteenth centuries, in addition to later Kickapoo and Osage sites in Illinois and Missouri, respectively.

Sheldon's (1978) paper gives archaeological evidence of the presence of early peaches from a well in St. Augustine which was utilized between 1594 and 1623. They are also known from a number of Spanish mission sites in the Southeast (Sheldon 1978).

For a reference nearer to the Mid-South, it will be recalled that Father Membre, who accompanied La Salle down the Mississippi in 1682, mentioned "peaches already formed on the trees, although it was only the beginning of March" when 40 leagues below the mouth of the Ohio among the Arkansas. He later twice again noted their presence farther down the river (Shea 1903:173, 175, 185).

When will we know when dent corn, watermelons, and peaches first reached the Mid-South and were cultivated there?

REFERENCES CITED

- Anderson, Edgar, and William L. Brown
 - 1952 The History of the Common Maize Varieties of the United States Corn Belt. Agriculture History 26:2-8.
- Anderson, Edgar, and Hugh C. Cutler
 - 1942 Races of Zea Mays: I, Their Recognition and Classification.
 Annals of the Missouri Botanical Garden 29:69-88.
- Beverley, Robert
 - 1947 The History of the Present State of Virginia. Reprinted. University of North Carolina, Chapel Hill. Originally published 1705, R. Parker, London.
- Blake, Leonard W.
 - 1981 Early Acceptance of Watermelon by Indians of the United States. Journal of Ethnobiology 1:193-199.
- Blake, Leonard W., and Hugh C. Cutler
 - 1976 Indian Corn in Eastern United States East of the Rockies.
 Paper presented at the 41st Annual Meeting of the Society for American Archaeology, St. Louis.
- Brown, William L., and Edgar Anderson
 - The Northern Flint Corns. Annals of the Missouri Botanical Garden 34:1-29.
- Connor, J. T.
 - 1925 Colonial Records of Spanish Florida, Vol. I, Letters and Reports of Governors and Secular Persons, 1570-1577. Deland, Florida.
- Cutler, Hugh C.
 - 1980 Corn from 38-Bu-162A, a South Carolina Site of about A.D. 1566-1587. In Stanley South, The Discovery of Santa Elena, 91-94. University of South Carolina Institute of Archeology and Anthropology Research Manuscript Series No. 165.
- Cutler, Hugh C., and Leonard C. Blake
 1976 Plants from Archaeological Sites East of the Rockies.
 University of Missouri Columbia American Archaeology Division
 Reports No. 1. Microfiche.

- Ewan, J., and N. Ewan
 1970 John Banister and His Natural History of Virginia, 1678-1692.
 University of Illinois Press, Urbana.
- Geiger, Maynard
 1937 The Franciscan Conquest of Florida, 1573-1618. Catholic University of America, Washington, D.C.
- Kohler, Tim A.

 1979 Corn, Indians and Spaniards in North-Central Florida: A
 Technique for Measuring Evolutionary Changes in Corn. Florida
 Anthropologist 32:1-7.
- Le Page du Pratz, Antoine Simon
 1975 The History of Louisiana. Reprinted. Louisiana State
 University Press, Baton Rouge. Originally published 1774, T.
 Becket, London.
- Lyon, Eugene
 1976 The Enterprise of Florida. University Presses of Florida,
 Gainesville.
- Serrano Y Sanz, M.
 1912 Documentos Historicos de la Florida y Luisiana Siglos XVI-XVII.
 Victoriano Suarez, Madrid.
- Shea, John G.
 1903 <u>Discovery and Exploration of the Mississippi Valley</u>.
 J. McDonough, Albany.
- Sheldon, Elizabeth S.

 1978 Introduction of the Peach (<u>Prunus persica</u>) to the Southeastern
 United States. Paper presented at the 19th Annual Meeting of
 the Society for Economic Botany, St. Louis.
- South, Stanley
 1980 The Discovery of Santa Elena. University of South Carolina
 Institute of Archeology and Anthropology Research Manuscript
 Series No. 165.

CHAPTER 2

THE DIRECT HISTORICAL APPROACH AND EARLY HISTORICAL DOCUMENTS: THE ETHNOHISTORIAN'S VIEW

Patricia K. Galloway

The recent resurgence in popularity of the Direct Historical Approach for studying the Protohistoric period in the Southeast is probably in one sense merely the result of grasping at straws by contract archaeologists, trained as prehistorians but faced with Protohistoric sites and materials and being forced to try to make some sense of them. There has accordingly been a great deal of use of early Historic documents without the protection of the critical tools developed by historians over several centuries, and in some cases this uncritical approach to historical sources has had results which may have been entertaining but have hardly been informative. The purpose of this paper is to offer to the archaeologist a useful toolkit to apply to these sources.

In the past few years there has been an increased interest in the archaeology of the Protohistoric and early Historic Native American populations in the United States, and whatever may have been its cause, it has been obvious that this new interest has revived a relatively "old" methodology: the Direct Historical Approach (Willey and Sabloff 1974:114). In some instances preliminary efforts have been made to integrate the evidence from early historical sources into a processual model of the transition from Late Mississippian through Mississippian Decline through Protohistoric to Historic Native American cultures, but this is the exception rather than the rule. More often, there has been a drastic chasm between the archaeological evidence defining the periods up to European contact and the historical evidence defining the historic period, and this chasm is most frequently given physical expression by the tendency for contract archaeological institutions to produce multivolumed reports, the historical volume of which, written by a historian, neither includes to any great extent nor even considers the archaeological evidence, while the historic archaeology volume included in the report swallows the history whole and merely attempts rather desperately to explain why evidence for it is scarce in the ground. There is precious little done in the way of applying anthropological analysis to the historical documents or historical analysis to the archaeological data. The faces of the Two Cultures remain determinedly oriented in opposite directions.

This is neither a useful nor a necessary state of affairs, and it could be reversed if historians would make their historiography rather more explicit—and apply its principles more critically themselves to evidence about Native American cultures—and if archaeologists would learn something of the principles of historiography as they apply to the special case of ethnohistorical data. The trouble is that in spite of

Dr. Patricia K. Galloway, Department of Archives and History, P. 0. Box 571, Jackson, MS 39205.

the now well-established existence of the American Society for Ethnohistory and of the fine work being done by many practitioners in the field of ethnohistory, it is only the rare archaeologist--Bruce Trigger (1976) on the Huron being the most shining example to spring to mind--who has the time or the interest to acquire the specialized skills of ethnohistorical historiography. Too often the time constraints of contract archaeology make it impossible to come to this level of integration in analysis, and the sad truth is that when it comes to the allocation of funds, it is often the case that the lion's share is devoted to work on the oldest components of a site at the expense of the proper treatment of later ones, particularly the Protohistoric and Historic. Yet much can be done by the prehistorian with a few historiographic tools and rules of thumb, and it is the purpose of this paper to arrange such rules and tools into a kit which, if nothing else, can serve as a sort of historical paramedic's bag, allowing the archaeologist to diagnose the case as far as he himself can handle it and to recognize when it would be well to turn it over to the fully practiced expert in the field in question.

The classic problem that any historian faces when he starts to deal with original sources is that he has to try to put himself in the observer's place, while at the same time maintaining a distance from his subject so that he can filter out the biases of the observer as they affect the reported observations. This is especially important in dealing with historical sources about people who wrote no history themselves, because the people who were writing their history for them observed them from outside their culture. The documents in the North American case at hand are usually written from a Western, European point of view, and it is necessary to know the context of that point of view in order to understand not only the descriptions written by Europeans but also the cultural context which conditioned their observations.

In the Southeast, the first Europeans to probe the country deeply were the sixteenth-century Spaniards, at that time not only the most medieval, feudal people in Europe but also a people whose prior experience with Native Americans was exposure to the very highly organized chiefdoms of Mesoamerica which they had exploited in a very specific way. Then there is a gap of nearly a hundred and fifty years. The next groups of Europeans to journey deeply into the Southeast were the French and the English. In spite of their very clear mutual differences, both of them together were very different from the Spaniards, and so their view of the Southeastern Indians was quite different, wholly apart from any societal changes that had taken place among the Indians in the interim. Both the French and the English pursued a mercantilist philosophy in their colonial ventures, but the French colony was run mostly by the military, whereas the English colonies were very much more capitalist-civilian oriented, at least in terms of the people who contacted the Indians of the Mid-South.

There are two general kinds of ethnohistorical evidence that are produced by culture-contact situations. The first one is quite obviously exemplified by the data that we have from the Spanish visit in 1539-1540, and that is the static snapshot view of Indian societies at a single point in time. This view differs quite dramatically from what I call the epic viewpoint, where the European group had a long-term contact with the Indian groups that are described. The snapshot description tends to have a lot of shock and surprise in it, and hence also a lot of

blindness, because only the most striking features relevant to the European purpose at hand can be noted. In the epic viewpoint, the viewpoint that changes over time, there is a slow development and increase of knowledge. This means that some cultural element may be described after a hundred years of contact which was not described at the beginning, not because it was not there, but because it was not noticed or Europeans were not permitted to see it.

These elementary classes of situations exemplify the kinds of constraints on the ethnohistorical evidence that must be considered. It is not necessary for archaeologists to become historians in order to use the Direct Historical Approach, but it is necessary to know that problems of a historiographical nature exist and that it might be a good idea to talk to a historian who knows the documents and more especially the men who wrote them.

The second aspect of this problem of using the Direct Historical Approach and ethnohistory is the limitation on inferences that may be drawn from living evidence. There are two varieties of such evidence. There is the living system observed by the person who is doing the describing, and there is also communication to him of tradition about the past. If the observer has something explained to him by one of the people he is observing, quite likely he has very little way of distinguishing whether the explanation pertains to current practice in a direct way or whether it is traditional--that is, that it has held on from the past and may (or may not) have only metaphoric meaning in the present. Hence many documents containing what appears to be contemporaneous ethnographic description are time capsules in which the customs observed in the present are telescoped in with explanations of these customs that were created in the past and are described as tradition in the present. The other side of the coin can be just as troublesome. Etiological myths, which explain the past and how things came to be, may be quite modern inventions designed to integrate into a changed culture some practice whose true origin has been forgotten.

There are also limitations on direct observation. For example, Swanton has written about the Choctaw that they seemed to be very uninteresting to European observers, and in fact had very little in the way of ceremonialism (Swanton 1931:1). I contest that claim very strongly. I am convinced that Swanton believed the Choctaw to have had "very little ceremonialism" because the French and the English who described them were not allowed to see it. Tallying the times when the French visited the Choctaw in their villages and reported what they saw. one discovers that these visits never took place at times when such ceremony would have gone on, that in fact the Choctaw always seemed to be unavailable at the time that they would have been having a green corn ceremony, mourning rites, or something of the kind. In fact, the first description of Choctaw stickball play, which was certainly at least as firmly established an activity in the eighteenth century as it was later, is from a source no earlier than the nineteenth century. It is therefore no wonder that Swanton had to turn to nineteenth-century sources for description of social institutions. There is no evidence to explain why there are no such descriptions, unless the Frenchmen, most of them traders or interpreters, who lived closely with the Choctaw and participated in Choctaw life were ceremonially accepted into such participation only if they were willing not to discuss the details of certain matters with their former countrymen (in this connection one may note that even Adair, in spite of his close and long-maintained relationship with the Chickasaw, has very little to say on ceremonial matters with reference to them). Less charitably, one can examine the records pertaining to the traders and interpreters, and frequently one finds that they were illiterate and could not have written of these matters in any case.

Whatever may be the true explanation, and no matter how many European sources may be examined for the Choctaw, all that can be found is a hint here and there of the existence of ceremonialism or other institutionalized activities. A great deal of digging was required to find a backhanded mention of funerary ceremonialism apart from the frequently-described secondary processing of the corpse. This ceremonialism was apparently highly developed; the record comes from the late 1740s, on the occasion of the death of one of the divisional chiefs, and it implies that there were many ceremonial activities, lasting several days, that took place when the bones were removed from the scaffold--when the de-boning, as it is called by Swanton, was performed--for interment in some kind of an ossuary. This is a source that no ethnographer has cited, and it is admittedly scrappy, but the very matter-of-fact mention of the ceremonies by Choctaws to their French interlocutors implies their institutional nature (Beauchamp 1746).

One aside is warranted here: one should be aware that Swanton, although he made very good use of the material to which he had access, did not have access to all the material. He was working with copies, most of them hand-written, that were made in France, Spain, and England, and made available to him through the Library of Congress. From my work on the editing of volumes IV and V of Mississippi Provincial Archives. French Dominion, I have direct evidence that there was a great deal that had not been brought to Swanton's attention. The document that is the basis for Swanton's short piece about Choctaw moieties (Swanton 1932) was in fact sent to him by the original editors of those two volumes. for whom he wrote a long footnote on this topic (Rowland, Sanders, and Galloway 1984(IV):128), as well as another on ceremonial names, both of which have been published as he wrote them. The point is that when the documents in these volumes were first being edited in the 1930s, after Swanton had written his definitive book on the Choctaw, he had not yet seen a good number of very useful sources. So although none of us will ever know everything possible from ethnohistorical sources, because all the documents that exist to be read have yet to be unearthed, the documents which are now available deserve checking into again. Swanton's pioneering work is not to be dismissed, but it is not the last word.

A modern parallel for all this difficulty of observation can be cited. Recently there has been an exhibition of modern photographs of Choctaws at the Mississippi State Historical Museum in Jackson, a collection rather insensitively entitled "Strangers In Their Own Land." This collection contains photographs of a man who is a herbal doctor, and the catalogue includes some commentaries from him. Personal communication from John Peterson, Professor of Anthropology at Mississippi State University, who has done a great deal of work with modern-day Choctaws, gives evidence that a Choctaw doctor who would reveal any information to a non-Choctaw about his identity as a Choctaw doctor would immediately be decried by his fellows as a quack. This man

apparently has been so identified for approximately twenty years, so he presumably has not practiced for some time. This is just one modern example of the kind of thing that was likely to have occurred in the past and that we really have no sense of; because, of course, none of the Europeans making their reports to the home country wanted to admit--if indeed they were aware--that they were describing what they saw but did not actually know what it meant. If they thought they were illinformed, they certainly had little reason to advertise it.

The topic that is at the heart of this whole discussion is textual criticism. In dealing with documentary evidence, it is necessary to do textual analysis, which means first of all looking at the text, particularly if it is hand-written, in order to determine how far it is from the original text that it was presumably based upon. This is more important than one might think, because the bureaucratic structure of most of the governments that dealt with the Indians of the Southeast meant that nine times out of ten the documents that we see were in fact dictated to or copied by a secretary or scribe; they were not even written down by the original author or observer. The extant documents are also a drastically reduced subset of the documents that were produced in the course of colonial administration, and a biased sample at that, which is the result of what I will call "bureaucratic censorship." I will never forget being asked, "Where can I find historical documents which emanated from Fort Tombecbé?" I said, "You won't. They were probably used to light fires. They never went to France, and unless they are in somebody's trunk in a Louisiana attic, they are probably gone." Being informed about what the bureaucratic setup was, in order to know how the documents were produced in the first place, offers a great deal of insight into how much reliability they have: how third- or fourth- or fifth-handed they are to begin with. Most of the French documents, except for individual narratives like that of Le Page Du Pratz (1758), were written by a bureaucrat in New Orleans who certainly did not see the things that are reported and who may well have been misunderstanding reports that he had received from the field, or misrepresenting them for his own purposes (cf. Galloway 1981).

I do not mean to say that the situation is hopeless. There are clues that can be sought in order to filter out some of this inevitable bias. Of specific usefulness are the facts of the context of observation. Examine the social history that is behind the situation. Who is the observer? What was his standing? What particular interest did he have in presenting a certain point of view? How was he trying to present himself? Then attempt to identify, as well as possible, the social milieu in which the observed people were living. It may, for instance, be the case that the Indian people who are being observed are not in their village but are in a European settlement at an annual convocation where they are to be given presents as part of their relationship with the Europeans. Or again it may be that when the observer states that he is in the village, he is in truth only in a certain part of the village, on the outskirts, and is not allowed anywhere near the main part of the village where ceremonialism or other practices in which we might be interested are taking place.

Among anthropologists, under the heading of acculturation, a great deal of discussion has gone on about the so-called "brokers," people who quite frequently were members of out-groups in their own society and who

found it to their advantage to become brokers between the intrusive society and their own (cf. Brown 1980:379-382). If the colonial society had not remained, these brokers would probably have been in serious trouble with their own people. Since it did, and since it eventually prevailed, the participation of these people in the intrusive society made their view of reality prevail in the European documents. Hence part of the "broker" issue has to do with the brokerage of information. Are the people who are giving the information full participants in their own society; or are they some sort of pariahs, who are on the outskirts of their own society; and are they likely to know anything? The example of women's languages in the South Seas is well-known from Margaret Mead's work, and we all know that if you are of one sex you are quite unlikely to be able to observe very much of the private life of the opposite sex; unless you have a privileged status such as Mead claimed (apparently mistakenly) for herself during her later work, there is quite a bit that you will not be allowed to observe, whether or not you are from an intrusive society; age-grades and sex can make a great deal of difference. Along those lines alone, I know of nothing substantive-and very little of an anecdotal nature (comments from Du Pratz' Chitimacha slave and a few Natchez women of rank, for example)--that describes Indian societies in the Southeast from a woman's point of view. There is nothing at all from children, of course, and the precious little from adolescents comes exclusively from boys. So the likelihood that we are going to get that kind of observation is almost nil, which makes it not terribly surprising that women and young people play little part in the descriptions that we have.

This contextual issue includes the relationship between the observers and the observed, which, as I say, has a lot to do with their respective standings in their individual societies and with their sex, age, etc. In addition to these contextual givens, it is also necessary to pay attention to contingencies—that is, the intentionalities of the individuals whose meeting produces the information. Again we can use an example: a French trader. Such an identity for the author of the so-called "Anonymous Relation," which Swanton translated and reproduced several times (Swanton 1918, 1931), would explain the presence of the little bits of detail about what women are doing: the trader-observer is trying to determine where the market is, so he watches his potential customers' activities. Because the man has such interests, the "Relation" has one of the very few good external descriptions we have of some of the women's activities.

A second problem to be dealt with in considering intentionalities is the observational blind spots that the European may have, no matter what his desire to observe properly. The most obvious case in point is the missionary. Now some missionaries, Franciscans for example, who fought very hard to get control over the missions to the Indians under the French, were concerned only with conversions and had no desire to understand what they saw as the Indians' "disgusting" practices. The Jesuits, on the other hand, got a lot of bad press at the time because they wanted to try to introduce their religion into existing native religious practices in a way that the Indians would understand. Many times they were much more caught up in their interest in understanding the Indian society than in their conversion activities, so that they ended up mostly converting people who were near death. Yet even in spite of the Jesuit interest in native custom, their very vocation condemned

them to observational blind spots galore. The missionary is only the most obvious of colonial personnel with built-in blind spots, but a military officer or a trader is going to have them too, and it is necessary to know what those are going to be or at least to try to predict them, which can be done by looking at a number of accounts by persons playing the same kind of role to see what kinds of things are routinely not mentioned. Since one is forced to assume that either they do not see something or it is not there to be seen, I think that in the absence of negative evidence one must take the prior course. One cannot forget that they can be looking straight at it and not see it.

I have alluded to censorship. In the case of the French materials and a certain amount of the English materials, there is clear intentional censorship over and above the unintentional "bureaucratic censorship" I have described. With the Spanish materials there is a de facto censorship in that so very little evidence survives at all. We have been told within the last couple of years, for example, that there is probably another source that was written by one of the priests who accompanied De Soto, but only a summary of it has been found and not the whole account (Lyon n.d.). This discovery has caused much excitement, however, because the disappearance or loss of documents from this period is so common that only a tiny fragment of the evidence from the sixteenth century survives. When there is true censorship--that is, when the person who is communicating the data for one reason or another has good reason to suppress part of it--we cannot even guess at what has happened to the evidence. For instance, a colonial governor may not give correct information on what the political groupings are within a certain tribe because he backed the wrong one (or because, at one rung down the ladder, a post commander made a bad mistake and lied to cover it up). Hence what we have may be a picture that makes social organization look entirely different from what it actually was. This is the case with a British observer who labeled the red and the white moieties among the Choctaw. He reversed the attribution, and this mistake was repeated by Swanton and then reverberated throughout the rest of Swanton's analysis and through all others since that have depended upon his work (Swanton 1931:78).

I want to make one final remark on reliability. There is a phrase that is a useful rule of thumb: "Coreferentiality does not constitute proof." Which means that just because two people say they are talking about the same thing, that does not mean that if their statements corroborate one another they are true. They may merely share the same blind spots.

A word about maps. We would all like to see more maps; in Paris and Madrid there are many hundreds that have never been studied. Even for the maps that are published and written up in the geographical literature, very little work has been done to establish their validity for the location of Indian tribes. Cumming's work, The Southeast in Early Maps (1958), is quite excellent given its limitations. It is the best compendium on Southeastern maps that there is to date, but Cumming apparently did not have extensive access to French sources at the time he wrote the book, and so it does not cover the Lower Mississippi Valley to any great extent. Nor does it draw very much upon French sources, which is what must concern us for the Mid-South because the geographical entity in question is the Louisiana colony. A publication now nearing

completion, by the late Joseph Castle of the Louisiana State Museum, will make many more French maps available, but for the present it is necessary to make a study of the known maps, to note what the mapmaker's sources were and why he decided what to put where. An example that readily comes to mind here is the appearance of a people called the Anilco on the Yazoo River on French maps of the seventeenth and the first decade of the eighteenth century, when nobody mentions them at all in narrative sources (Sanson 1656; Delisle 1701). Tracing the geographical sources back, one finds that this tribal name is located on a map by Joannes de Laet which drew upon Spanish maps (Laet 1630) and that is why it is there on later maps; it just never disappeared. De Soto himself only heard of the tribe at second hand.

Maps were almost always made by cartographers back in Europe, and they are only as good as the information that the mapmakers got. Sometimes very commendable efforts were made. The DeLisles, father and son, royal cartographers of France, interviewed all the explorers when they returned to France and tried to get as much information as they could out of them, but the DeLisles were the exceptional best. On their maps it is possible to see things changing dramatically during the early period of settlement, from Iberville in 1699 onwards. There is some very odd information in Claude DeLisle's 1701 manuscript map (including the Anilco cited above), but then by 1703 (when the Anilco disappear), and particularly by 1718 (Guillaume Delisle), the maps become much more intelligible, more clearly reflecting what the narratives describe.

It is also necessary to bear in mind that the knowledge that is represented on maps accumulates, and that where there is a blank spot on a map, the mapmaker just might put something to make it look pretty. Or there may be a name to put on a map but no certainty about where it goes, and often it seems that the mapmakers simply chose a convenient blank space. It is therefore necessary to try to track down the narrative sources that the mapmaker worked from and also to understand the sophistication of his technique—whether in fact he has a list of compass readings or whether what he has is a collection of old maps and a few incoherent explorers' memories along the lines of "Well, it's not quite right, it belongs a little bit more north than that." Thus whatever their attractiveness or verisimilitude, maps too must be questioned for their sources. Inaccuracy must be expected until purposive exploration can be presumed to have provided guidance.

It is instructive to compare other treatments of the Pearl River with that of Régis du Roullet after he had actually traveled down the river, taken compass readings at every single bend, and drawn up the map very soon afterwards (Régis du Roullet 1732). His map is so good that it is possible to go down the Pearl today and almost precisely follow his course, allowing for the changes in the river's course that have taken place since his time. In short, his map is just about as exactly right as was possible in that day and time. After Régis, his Pearl River, along with even the few mistakes that he made, turns up on everyone else's maps. In fact, Régis' Pearl keeps being used into the nineteenth century, by which time the situation particularly on the lower Pearl had altered considerably. Object lesson: find out where the information embodied in maps comes from. They can be extremely useful, but they may not be particularly informative if taken at face value.

In spite of all these caveats, there are ways to use these documentary materials for backward extrapolation which can assure a

reasonable degree of confidence. It is possible to outline a process of hypothesis testing and a set of assumptions that will provide an adequate litmus test of documentary reliability. We begin with postulates.

First, it is necessary to assume that under conditions of culture contact the societies in contact will both have changed to one degree or another. Secondly, this change will not have involved just one part of the cultural system, but all of it--just because it is a system. From these two assumptions it would seem that documentary evidence cannot be at all reliable for reconstruction of prior conditions. It is true that these assumptions limit the kinds of evidence that are likely to be of use, but they do not wholly preclude the usefulness of historical documents.

One way to test one's understanding of the documentary evidence and the accuracy of that evidence itself is to extract from it a model of the societal structure as portrayed in the documents and then to use that model to extrapolate forward in time, into the future where the outcome is known. If the result of such extrapolation is wrong, then either the model was wrong (the documents were misunderstood) or the documentary evidence is incorrect or fragmentary. In either case the fault needs to be diagnosed and remedial steps taken if possible so that the predictive ability of the model is confirmed. Once a reliable model has been achieved, it can be used to extrapolate backwards to generate possible prior structures conditioned by different hypothetical values for economic, demographic, locational, etc., variables. These models can then be tested against the archaeological evidence.

No one says that this process is easy or that anyone has worked out a foolproof method for doing it; that task lies more clearly in the realm of the anthropological theory-spinners. One historiographer's trick that can be of use, however, is the observation that trouble spots in the society are often diagnostic of parts of the social system that are undergoing or have undergone change. Such trouble spots include most obviously imperfectly institutionalized methods of conflict resolution, but they also extend to more subtle problems like confusion in social roles. The rule of thumb here: where there is a strain or rent in the social fabric, there one must look for evidence that the old is being replaced by the new. As pearlware replaces Chickachae Combed on homesteads whose distribution depends less on proximity to Choctaw political centers and more on the convenience of roads; as the hierarchic structure of Mississippian settlement patterns gives way to a more uniform distribution of sites over the landscape--we need documents to help flesh out the material evidence and to confirm what it can only suggest. But it is vital that the documentary evidence be probed as deeply and critically as the archaeological evidence, or the Direct Historical Approach has no hope of providing the unique advantage it promises.

REFERENCES

Beauchamp, Jadart de

1746 Journal. In Dunbar Rowland, A. G. Sanders, and Patricia Galloway (editors), Mississippi Provincial Archives: French Dominion, IV:269-297. Louisiana State University Press, Baton Rouge.

Brown, Ian

1980 Early 18th Century French-Indian Culture Contact in the Yazoo Bluffs Region of the Lower Mississippi Valley. Unpublished Ph.D. dissertation, Department of Anthropology, Brown University, Providence.

Cumming, William

1958 The Southeast in Early Maps. Princeton University Press, Princeton.

DeLisle, Claude

1701 Carte des environs du Mississippi.

DeLisle, Guillaume

1703 Carte du Mexique et de la Floride

1718 Carte de la Louisiane et du cours du Mississippi.

Galloway, Patricia

1981 Louisiana Post Letters, 1700-1763: The Missing Evidence for Indian Diplomacy. Louisiana History 22:31-44.

Le Page Du Pratz, Antoine Simon

1758 Histoire de la Louisiane. 3 vols. De Bure, Paris.

Laet, Joannes de

1630 Florida et Regiones Vicinae.

Lyon, Eugene

n.d. The Cañete Fragment: Another Narrative of Hernando de Soto.
Manuscript.

Régis du Roullet

1732 Carte du cours de la Rivière aux Perles

Rowland, Dunbar, A. G. Sanders, and Patricia Galloway (editors)
1984 Mississippi Provincial Archives: French Dominion, vols. IV
and V. Louisiana State University Press, Baton Rouge.

Sanson, Nicolas

1636 Nouveau Mexique et la Floride.

Swanton, John R.

- An Early Account of the Choctaw Indians. American Anthropological Association, Memoir, 5:33-72.
- Source Material for the Social and Ceremonial Life of the Choctaw Indians. Bureau of American Ethnology Bulletin No. 103.
- 1932 Choctaw Moieties. American Anthropologist New Series 34:357.

Trigger, Bruce G.

The Children of Aataentsic: A History of the Huron People to 1660. 2 vols. McGill-Queens University Press, Toronto.

Willey, Gordon R. and Jeremy A. Sabloff

1974 <u>A History of American Archaeology</u>. W. H. Freeman, San Francisco.

CHAPTER 3

THE PROTOHISTORIC PERIOD IN THE LOWER AND CENTRAL ARKANSAS RIVER VALLEY IN ARKANSAS

Michael P. Hoffman

The central and lower portions of the Arkansas River Valley were extensively occupied in the 1500 to 1700 period. Two related archaeological phases, the Carden Bottoms phase (in the central valley) and the Quapaw phase (in the lower valley) are represented. Unfortunately, sites are known primarily on the basis of very old mortuary data recovered by archaeological pioneers such as C. B. Moore and S. C. Dellinger, and pothunted collections, so information on subsistence—settlement and many other areas of interest is deficient. The mortuary ceramic complex, although containing several distinctive regional characteristics, is related to antecedent and contemporary Mississippian manifestations in eastern Arkansas. Ceramic trade is indicated by significant amounts of Caddoan, Natchez, and Tunica pottery. The Quapaw phase is convincingly linked to the historic Quapaw tribe, a Siouan speaking group with several ethnological features different from other historic Southeastern tribes, and an emic tradition of recent arrival in the Lower Arkansas River Valley. It is difficult to reconcile the evidence of Quapaw ceramic continuity with the ethnological discontinuities.

INTRODUCTION

The 1500 to 1700 period was a time of extensive Indian occupation of the Arkansas River Valley from its mouth to at least three hundred kilometers upstream. This paper summarizes some of what is known about Protohistoric Indian habitation in the valley and reveals much of what is not known. There is also speculation about the relationship of the historic Quapaw tribe and the Protohistoric phases. The archaeological data available from the valley are, for the most part, mortuary information collected long ago; thus little new substantive information is provided here. Specific exceptions include a general distribution map of Protohistoric sites compiled from the site files of the Arkansas Archeological Survey, a beginning definition of the Carden Bottoms phase derived from a University of Arkansas M.A. thesis draft (Clancy 1985), and bioarchaeological observations contributed by Jerome Rose of the University of Arkansas, Department of Anthropology.

Stephen William's Armorel phase postulate (1980) and the Morses' publication on the archaeology of the Central Mississippi Valley (1983) provide artifactual horizon markers for the Protohistoric period which are useful along the Arkansas River. Artifacts such as Nodena points, small end scrapers, head pots, tea pots, and pottery types such as Parkin Punctated, Barton Incised, and Wallace Incised are widespread in sites of the Arkansas River Valley. Also, European trade goods of possible Spanish and later French derivation occur in sites in both the lower and upper portions of the study area.

Michael P. Hoffman, 417 Hotz Hall, University of Arkansas, Fayetteville, AR 72701

In Arkansas the river flows through two major physiographic regions—the Arkansas Valley Trough, between the Ozark and Ouachita Mountains, in upstream section above Little Rock—and the Mississippi Alluvial Plain from Little Rock to the mouth of the river. The identified Protohistoric archaeological phases correspond fairly neatly to this twofold physiographic division.

THE QUAPAW PHASE

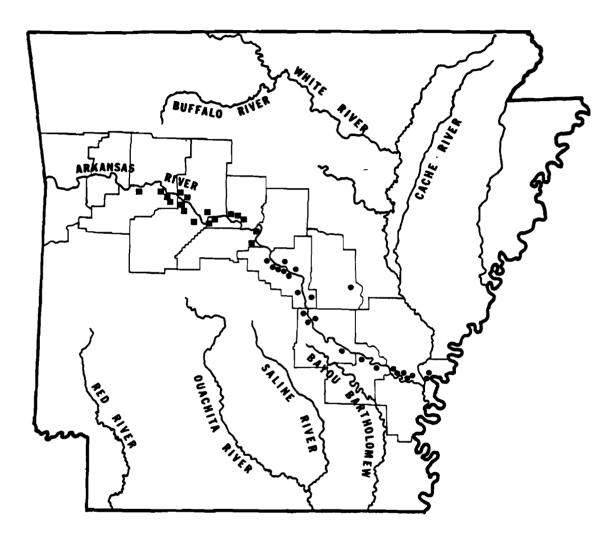
The Quapaw phase is the better known of the Protohistoric phases along the river. It is based on very limited data--primarily the burial excavations of C. B. Moore (1980) at the Menard, Old River Landing, Douglas, and Greer sites, and the work of S. C. Dellinger of the University of Arkansas Museum in 1932 at the Kinkead-Mainard site near Little Rock (Hoffman 1977). Also, there are surface survey records by the Lower Valley Survey (Phillips, Ford, and Griffin 1951) and the Arkansas Archeological Survey. The only significant published excavation of a Quapaw phase habitation area was that of Ford at Menard (1961). A first attempt to characterize the archaeological manifestation was made by Dickinson and Dellinger (1940) and was refined subsequently by Ford (1961), Phillips (1970:943-44), Phillips et al. (1951:449), Hoffman (1977:32-35), House and McKelvey (1981) and the Morses (1983:300-301). Amateur archaeologists and collectors have published their own versions of the Quapaw "culture" (Hathcock 1982; Westbrook 1982), which tend to be much broader than professionals' perceptions.

A distributional study (Figure 3.1) of Quapaw phase sites along the Lower Arkansas River, based on the records in the Arkansas Archeological Survey's site files, reveals less than two dozen in the long expanse of valley.* Sites are overwhelmingly close to the present river on old riverbanks or natural levees and many are located near sloughs or old channels. Site sizes are not well known, but 1.0 ha to 1.5 ha appear consistently in the site files. The 16 ha Menard site may be much larger. Low house mounds are common features (12 to 20 at the Red Bluff site in Jefferson County), and temple mounds, conical mounds containing burials, and plazas are known at several sites. Apparently, the settlement pattern consisted of fairly compact villages instead of the dispersed farmstead variety. Three houses attributed to the Quapaw phase in Arkansas have been excavated. All had a rectangular outline (as do the house mounds), but were not particularly large (9 m by 6 m at Menard is the largest). Groups of burials occur in association with the houses and house mounds at several sites.

There is considerable variation in mortuary treatment in the phase with bundle burials under charnel house floors on mounds and bundle, flexed, sitting, extended, and skull burials in habitation areas clustering presumably around houses. Grave goods are primarily pottery, which occurs in modest amounts with individual burials.

A recent preliminary study by Jerome Rose of a Quapaw phase skeletal sample from the Kinkead-Mainard site indicates that dental caries

^{*}Because the site files often do not contain sufficient data to place a site in a particular phase, I place little confidence in the accuracy of this figure.



- CARDEN BOTTOMS PHASE
- QUAPAW PHASE

Figure 3.1. Protohistoric phases along the Arkansas River.

rates were high and well within the range of maize dependent people. There were very high frequences of Cibra Orbitale and Periotic Hyperostis, conditions which result from iron deficiency anemia associated with high maize consumption (Jerome Rose, personal communication, May 26, 1983). Although the biased sample from the Kinkead-Mainard site precludes firm conditions, the skeletal infection rate in the population may have been in the 20% to 30% range, which is lower than a sample from the Nodena phase but higher than that of the late prehistoric Red River Caddo. It has been postulated that high infection rates are associated with nucleated settlement patterns and low infection rates with dispersed settlement (Rose et al. 1983).

The Quapaw phase ceramic complex is well known and does not need to be fully repeated here. A primary marker type, however, is Wallace Incised. Old Town Red and Carson Red on Buff are common burial ceramics. There are distinctive vessel shapes such as the "helmet bowl." A variety of Mississippi Plain with coarse shell temper called Nady is also characteristic. Bell Plain is not common. Quapaw phase sites near the mouth of the Arkansas River have significant amounts of mortuary and sometimes midden pottery of Tunican and Natchezan types and types from Protohistoric phases to the north such as Parkin. Near Little Rock, Late Caddoan engraved pottery from the Ouachita Mountain region is present in significant amounts.

The Nodena point is the only type present in mortuary contents. Euroamerican trade goods, primarily glass beads, copper and brass objects, gunflints, and gun parts occur in at least a half-dozen of the Quapaw phase sites.

Quapaw phase sites have been identified outside the Lower Arkansas Valley. Several are present on the western side of the Mississippi River above the mouth of the Arkansas River. The Oliver site on the east side of the Mississippi is recognized as a probable Quapaw phase site (Morse and Morse 1983:435). A series of sites on the Lower Red River, a tributary of the White River on the eastern fringe of the Ozarks, also qualifies (Morse and Morse 1983:300). A specialized activity salt site is known near Arkadelphia, Arkansas, and there is a postulated hunting camp in south central Arkansas on the Saline River.

The Quapaw phase is certainly Mississippian in most senses of the word. Ceramic styles fit in Central Mississippi Valley taxonomies easily, with particular resemblance to the nearby Protohistoric Kent, Old Town, and Walls phases (amateurs tend to lump all these phases together as "Quapaw"). Although there are significant amounts of mortuary pottery which are engraved, and with carinated shoulders or other distinctive Caddoan shapes, the bulk of the pottery from Quapaw phase sites is not Caddoan. The temple-mound-plaza site plan is present on some sites. Skeletal evidence indicates a Mississippian subsistence--maize dependency with all of its ramifactions. Missing thus far to round out inclusion in the Mississippian adaptation are good indications of strongly ascribed ranking and site hierarchies.

THE CARDEN BOTTOMS PHASE

The Carden Bottoms phase* is known from at least 17 sites or localities in the Arkansas River trough from just above Little Rock to about 80 km east of Fort Smith at the Oklahoma State line (Figure 3.1). This was an area of tremendous commercial pothunting in the 1920's and

later (Harrington 1924), and virtually no professional excavations have taken place. The Museum of the American Indian, The Gilcrease Museum, and the University of Arkansas Museum have the most extensive collections from the region.

Carden Bottoms is an archaeological locality rather than a single site. It consists of a series of ridges or natural levees near the mouth of the Petit Jean River, a stream which flows out of the Ouachita Mountains (Clancy 1985). Most of the archaeological finds occurred between the Lower Petit Jean River and the Arkansas River, where the streams parallel each other. Many burials and "wagonloads" of pottery were found on these ridges by tenant farmers and commercial diggers, particularly in the 1923 to 1924 period. Recent observations have noted that habitation midden is present on some of these natural levees and it is probable that the burials discovered in the 1920s were clustered in habitation areas (around houses) (Hilliard 1981). Some burials were found in the sitting position, but the details of the mortuary program are not known.

Phyllis Clancy, a graduate student at the University of Arkansas, is analyzing the University Museum's extensive Carden Bottoms collection. Table 3.1 illustrates her findings of types, frequences, and percentages of the pottery. The pottery is exclusively mortuary, and obviously a very biased sample. Pothunter selection, commercial dealer selection, and Museum purchasing selection all were present. Nevertheless, the data represent the only Carden Bottoms collection which has been studied quantitatively. Only one specimen, the Crockett Curvilinear Incised vessel, is clearly out of place chronologically and geographically; the other types form a credible complex. The Carden Bottoms ceramic complex is very similar to that of the Quapaw phase, with high occurrences of Old Town Red, Carson Red on Buff, and Keno Trailed. Helmet shaped vessels, the teapot form, various bottle shapes, and Conway type head pots are also similar, as is the Nady variety of Mississippi Plain. Wallace Incised is virtually absent (there is at least one specimen in the Lemley Collection at Gilcrease Museum) and Barton Incised is fairly common. Both of the latter features set the Carden Bottoms ceramics apart from those of the Quapaw phase. Almost one fifth of the decorated Carden Bottoms ceramics consists of Ouachita Mountains region Late Caddoan pottery, which is a higher proportion than that found in Quapaw phase sites. Tunican, Natchezan, and northeastern Arkansas pottery types are less common than in Quapaw phase sites downriver. Nodena points are the only known arrowpoint style in graves. A Clarksdale bell, copper wire bracelets, copper tinkling cones, and a few glass beads indicate that European trade goods are present in small amounts.

The only large mound group in the region, at the Point Remove site, is a few kilometers downstream from the Carden Bottoms locality on the opposite (north) side of the river near the mouth of Point Remove Creek. Here a temple mound, originally 4 m to 7 m high, four smaller mounds,

^{*}Carden Bottoms appears in the archaeological literature early (Harrington 1924) and is also what the present natives call the locality. However, U.S.G.S. maps refer to the locality as Carden Bottom. Phyllis Clancy has argued that the earliest and correct version is Carden's Bottom.

Table 3.1. University of Arkansas Museum Carden Bottoms Vessels by Type.

	<u>number</u>	percent
Avenue Polychrome	4	2.56
Barton Incised	30	10.94
Baytown Plain	2	0.73
Belcher Engraved	2 1	0.36
Bell Plain	11	4.01
Carson Red on Buff	26	9.49
Crockett Curvilinear Incised	1	0.36
Foster Trailed Incised	6	2.19
Friendship Engraved	1 6 5 6 4	1.82
Hodges Engraved	6	2.19
Hudson Engraved		1.46
Keno Trailed	21	7.66
Means Engraved	1 1	0.36
Military Road Incised		0.36
Mississippi Plain	97	35.40
Natchitoches Engraved	3 2	1.09
Nodena Red and White	2	0.73
01d Town Red	40	14.59
Parkin Punctated	5 1	1.82
Ripley Engraved	1	0.36
Simms Engraved	1	0.36
Vernon Paul Applique	1 1 4	0.36
Wallace Incised	1	0.36
Untyped		<u> 1.46</u>
	274	
	159 decorated	

Important parts of the ceramic complex

Barton Incised	Lesser importance
Carson Red on Buff	(3 or more vessels)
Keno Trailed	Avenue Polychrome
Old Town Red	Foster Trailed Incised
42.14% of all pottery	Friendship Eng.
	Hodges Engraved
74% of decorated pottery	Hudson Engraved
	Natchitoches Engraved
	Parkin Punctated

Engraved pottery & other Caddo pottery not including Keno Trailed 29 pots 10.58% of all pottery 18.24% of decorated pottery

and a village area existed. The University Museum has ceramics from burials excavated commercially at the site which are similar to those of the Carden Bottoms locality. Arkansas Archeological Society excavations in the temple mound in 1964 revealed several mound stages, indications of a structure, and pottery which resembles the Coles Creek-affiliated Plum Bayou culture of the Toltec site as well as Carden Bottoms ceramics (Ashenden-Duncan 1980). Several related habitation sites are nearby.

Other Carden Bottoms phase sites occur primarily at or near the mouths of streams where they enter the Arkansas River floodplain. They are known through mortuary ceramics purchased by the University of Arkansas Museum in the 1920s and 1930s, from the Lemley collection in the Gilcrease Museum, and through comments in site survey reports.

The Carden Bottoms phase is equivalent in time and very similar to the Quapaw phase. The low frequency of Wallace Incised and higher frequencies of Ouachita Caddoan ceramics are the main differences from the Quapaw phase.

THE QUAPAW PARADOX

The Quapaw is the historic Indian tribe, known first to history in the late 17th Century, which is associated with the Quapaw phase at least in its terminal stages. This relationship was documented by Ford (1961) at Menard, which he argued convincingly was the historic Quapaw village of Osotouy. The archaeological complex described by Ford at Menard has been widely accepted as representing the material remains of the tribe, and when found elsewhere the Quapaw tribal identity is extended. The Morses (1983:470) and John House (House and McKelway 1981:44) have questioned whether or not such a simple one to one connection is warranted. It is probable that the Carden Bottoms phase represents the upstream Quapaw, because the French were told by the tribe that their domain extended 480 km up the Arkansas River.

The historic Quapaw tribe is known, albeit insufficiently, to linguists, ethnologists, and historians. The primary data on the Quapaw include early French observations, some few sources on the Quapaw during the American period in Arkansas, late nineteenth century salvage ethnography using Quapaw informants by Dorsey and others, and contemporary ethnography (Oklahoma Indian Affairs Commission 1974). Quapaw spoke a tongue of the Dhegiha division of the Siouan language family which also includes Osage, Omaha, Kansas, and Ponca (Figure 3.2). Linguistic units of the Dhegiha division are so closely related that they are referred to as dialects with a single Dhegha language (Hollow and Parks 1980:69; Howard 1965), a feature which implies little time depth for their separation. Early Quapaw word lists were made by General George Izard in 1827 and a Quaker Missionary, Louis Hadley. most extensive Quapaw word list of over 2,400 words was compiled by J. Owen Dorsey in the late 1800s (Oklahoma Indian Affairs Commission 1977:40.) Robert Rankin of the University of Kansas recently has collected additional words from Quapaw informants and is also studying Dorsey's unpublished notes. There is unanimity among linguists about the inclusion of Quapaw in the Dhegiha language (Dorsey 1884, 1885, 1895; Fletcher and Le Flesche 1911; Hollow and Parks 1980; Rankin in Oklahoma Indian Affairs Commission 1977; Swanton 1946). In the wake of such agreement among linguists about the placement of the Quapaw language, it is surprising that the Morses (1983:472) seem to doubt it.

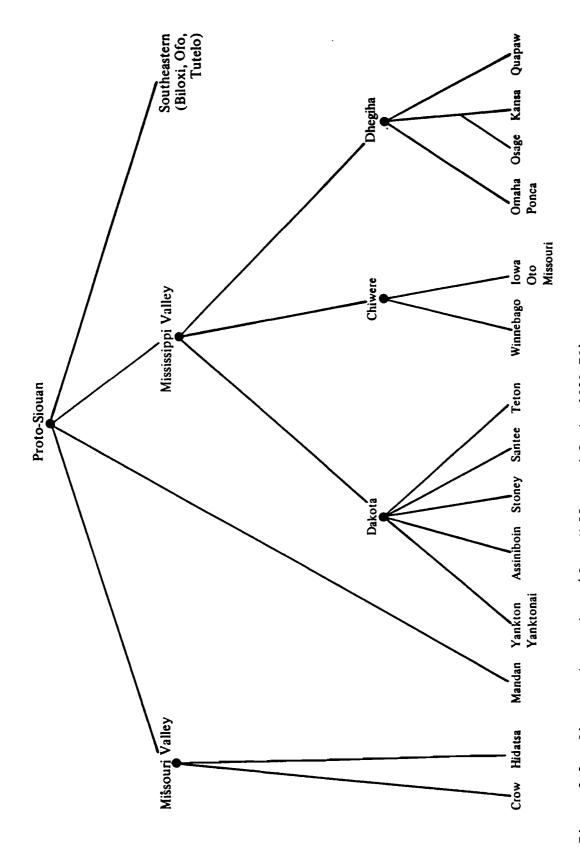


Figure 3.2. Siouan subgroupings (from Hollow and Parks 1980:76).

The Dhegiha language tribes also were similar in other ways. Fletcher and Le Flesche (1911:35) refer to the five Dhegiha peoples as "cognate tribes," with "their languages as yet hardly differented into distinct dialects," and which "bear a strong resemblance to one another not only in language but in tribal organization and religious rites." Such similarities include patrilineal descent, patrilineal clans, specific clan names, and moieties. Social ranking also was not highly developed among Dhegiha people.

The five cognate tribes share a common oral tradition of presence as one people in what ethnologists interpret as the Lower Ohio River Valley. From that area the Omaha (including the ancestors of the Osage, Ponca, and Kansas) journeyed up the Missouri River (The Omaha name for themselves means, "upstream, or against the current, or against the wind people"), while the people who went downstream on the Mississippi River became the "Ogxapa" or "downstream (or with the current or wind) people." Ethnologists, linguists, and historians appear to take the Dhegiha migration traditions seriously.

The early French observed that Quapaw houses were different from others in the South. They were long multi-family structures covered with bark similar to the summer houses of the Osage (which were covered with bark or mats). Other similarities occur sporadically among the Dhegiha people. For instance, Fletcher and Le Flesche note that the traditional burial treatment of the Omaha was in a sitting position (1911:592); a minority of Quapaw phase burials are in that position.

The archaeology of the Dhegiha Siouan peoples on the eastern Plains is not well known. Remains of the Protohistoric Omaha and Kansas are said to be Oneota-related (Wedel 1983:233). Sites which have been identified with specific Dhegiha tribes all have European trade goods (Wedel 1983:233). There are some general similarities between Quapaw phase materials and general Oneota cultures such as the use of wide trailed incisions on pottery, end scrapers, and bark or mat covered long structures.

Carl Chapman has surveyed Osage origins in an exhaustive way (1974). The Osage were first known to history in 1673, and from that time until 1825 they dominated the area between the Arkansas and Missouri Rivers. Their summer villages were on the Upper Osage River in Missouri. Only 18th century Osage sites are known through archaeology. These sites yield Oneota-related pottery. However, Chapman is very skeptical of the migration traditions of the Dhegiha tribes and believes that there is more likelihood of the development of the Osage tribe in place from Late Mississippian manifestations of the Ozarks such as the Neosho phase (1974:211).

The French received information about the former haunts of the Quapaw from Illinois and Miami Indians living near the Lower Ohio River area. The Lower Wabash and mouth of the Ohio River regions were called the "River of the Arkansea" because the tribe had lived there recently (Thomas 1959:334).

Archaeologists such as McGimsey (1964), the Morses (1983) and House and McKelway (1981) are impressed by the similarity of Quapaw phase characteristics with other earlier and contemporaneous nearby Mississippian phases and tend not to take seriously the possibility of Protohistoric Quapaw tribal migrations from the Lower Ohio River to the Lower Arkansas River.

Little is known of pre-Quapaw Mississippian habitation of the Arkansas River Valley. Both the Lower and Central Arkansas River Valleys had strong Late Woodland period occupations (the Coles Creek-related Plum Bayou culture on the Lower Arkansas River and Fourche Maline culture on the Upper Arkansas), but little is known of subsequent manifestations until the Quapaw and Carden Bottoms phases. The Quapaw and Carden Bottoms phases appear as sudden, late efflorescences in the area. Thus present evidence in the Arkansas River Valley proper does not indicate strong Mississippian period continuity from pre-Quapaw to Quapaw phases, certainly nothing like the Morses (1983) have demonstrated in several regions of the Central Mississippi Valley.

Quapaw tribal migration proponents look to the Lower Ohio River Valley for late archaeological manifestations which might have served as homelands from which the Quapaw and other Dhegiha Siouans moved. Aside from Cahokia, from which out-migrations might have taken place as late as A.D. 1300, southern Indiana and Illinois are the areas examined. The Caborn-Welborn phase described by Green and Munson (1978) is purported to contain mortuary pottery from southeastern Missouri and eastern Arkansas, including Wallace Incised and head pots, although the Morses (1983) believe that this pottery is the result of post-excavation mixtures of collections. However, recent recordings of collectors' findings at the Bone Bank site in Posey County, Indiana, tend to confirm the Missouri and Arkansas affinities of the Caborn-Welborn phase (Hathcock 1982:20).

If the historic Quapaw were fairly recent migrants to the eastern Arkansas area, one would expect skeletal characteristics which would express significant genetic distance from other Arkansas Mississippian collections. A beginning of such an effort has been made by Christy Turner of Arizona State University, who has made observations of dental morphology in skeletal collections held by the University of Arkansas Museum. His analysis has not yet been sufficiently fine-grained to yield significant results, however.

The Morses suspect that the historic Quapaw people, "are an amalgamation, the remnants left after European disease hit, of groups such as the Casqui, Pacaha and Aquixo (1983:470)." They attribute tribal myths about origins possibly to the late shifting of the Cairo Lowlands phase to near Memphis. The Quapaw phase does exhibit considerable heterogeneity in site characteristics, ceramic types, and burial treatment, which might be indicative of an amalgamation of disparate peoples. I suspect that it is at least as likely that the Quapaw phase around Little Rock and the Carden Bottoms phase further upriver attracted Protohistoric Caddoan people from the Quachita Mountains. This may indicate Quachita Caddoan dissolution in Protohistoric times.

Merger of tribes under disease or other stress with other peoples was common enough in the Southeast, but ethnologically one would expect to find tribal traditions of such mergers and evidence of linguistic heterogeneity. The Quapaw have no traditions of absorbing other peoples and their language seems unsullied by Caddoan or Gulf-Muskoghean words (such as the eastern Arkansas chiefdoms visited by De Soto may have spoken). The Quapaw in their history have freely intermarried with other tribes and non-Indians to the point where there are only four "pure-blood" Quapaw left. They have, however, retained their ethnic identity. In my experience, even groups which many anthropologists have

considered long since absorbed by larger entities, such as the Yuchi among the Creek and the Natchez among the Cherokee, remain emically identified in eastern Oklahoma. There still is a stomp ground there which is thought of as Natchez, for example.

CONCLUSIONS

Speculations about Quapaw ethnogenesis are fascinating and fun, but are likely to lead to few secure conclusions. It would be unwise for anthropologists to forget that there is no necessary correlation among language, culture, and biology, an adage which is probably even more true when the "culture" of the relationship is the material remains which archaeologists study.

It is possible to conclude that there was a sudden significant and florescent Protohistoric occupation of the Arkansas River Valley about which we know little except for mortuary remains. Such basic archaeological categories as subsistence, settlement, and sociopolitical organization are unstudied. In many cases such data are still there to be collected for modern research problems.

Acknowledgements. Several University of Arkansas people and organizations provided help for this paper. Museum staff members Mary McGimsey and Jan Browning did the photography and drafting. Jerome Rose of the Department of Anthropology made osteological observations. Phyllis Clancy provided a draft of her M.A. thesis in Anthropology. The Arkansas Archeological Survey gave access to its site files. Finally, a special thanks is due the Quapaw people for being an important part of Arkansas' heritage in the past and my friends in the present.

REFERENCES CITED

Ashenden-Duncan, Alice

1980 Preliminary Speculation Concerning the Sherds from the Society Dig in 1967 at Point Remove. Paper presented at the Arkansas Prehistory Seminar, University of Arkansas, Fayetteville.

Baird, W. David

The Quapaw Indians: History of the Downstream People. University of Oklahoma Press, Norman.

Chapman, Carl H.

The Origin of the Osage Indian Tribe. Osage Indians III.

American Indian Ethnohistory Series. Garland, New York.

Clancy, Phyllis

An Analysis of University of Arkansas Collections from Carden's Bottom, Yell County, Arkansas. Unpublished Master's thesis, Department of Anthropology, University of Arkansas, Fayetteville.

Dickinson, Samuel D.

Historic Tribes of the Ouachita Drainage System in Arkansas.

The Arkansas Archeologist 21:1-11.

- Dickinson, Samuel D., and Samuel C. Dellinger
 1940 A Survey of the Historic Earthenware of the Lower Arkansas
 Valley. Texas Archeological and Paleontological Society,
 Bulletin 4:1-18.
- Dorsey, James O.

 1884 Omaha Sociology. <u>Bureau of American Ethnology Annual Report</u>
 3:205-378.
 - On the Comparative Phonology of the Four Siouan Languages.

 Bureau of American Ethnology Annual Report for the Year

 1883:919-929.
 - 1894 Siouan Sociology: Posthumous Paper. <u>Bureau of American</u> Ethnology Annual Report 15:213-250.
- Fletcher, Alice, and Francis Le Flesche
 1911 The Omaha Tribe. <u>Bureau of American Ethnology Annual Report</u>
 27:17-672.
- Ford, James
 1961 Menard Site: The Quapaw Village of Osotouy on the Arkansas
 River. American Museum of Natural History Anthropological
 Paper 48:133-191.
- Green, Thomas, and Cheryl A. Munson
 1978 Mississippian Settlement Patterns in Southwestern Indiana. In
 Bruce D. Smith (editor), Mississippian Settlement Patterns,
 pp. 293-330. Academic Press, New York.
- Harrington, Mark R.

 1924 A Pot-Hunter's Paradise. Museum of the American Indian,
 Indian Notes 1:84-90.
- Hathcock, Roy
 1982 <u>The Quapaw and Their Pottery</u>. Hurley Press, Camden, Arkansas.
- Hilliard, Jerry E.

 1981 Archeological Reconaissance of a Proposed Ditch in Carden Bottom, Yell County, Arkansas. Submitted to Office of the State Archeologist Project No. 63 Arkansas Archeological Survey, Fayetteville. Copies available from Arkansas Archeological Survey.
- Hoffman, Michael P.

 1977 The Kinkead-Mainard Site, 3PU2, a Late Prehistoric Quapaw
 Phase Site Near Little Rock, Arkansas. Arkansas Archeologist
 16, 17, and 18:1-41.

- Hollow, Robert C., and Douglas R. Parks
 1980 Studies in Linguistics: A Review. In W. R. Wood and M.
 Liberty (editors), Anthropology on the Great Plains, pp.
 68-97. University of Nebraska Press, Lincoln.
- House, John, and Henry McKelway
 1982 Mississippian and Quapaw on the Lower Arkansas. In Hester A.
 Davis (editor), A State Plan for the Conservation of
 Archeological Resources in Arkansas, pp. 40-50. Arkansas
 Archeological Survey Research Series No. 21.
- Howard, James H.
 1965 The Ponca Tribe. Bureau of American Ethnology Bulletin 195.
- Izard, George

 Izard Papers. American Philosophical Society Library,
 Philadelphia.
- La Flesche, Francis
 1932 A Dictionary of the Osage Language. Bureau of American
 Ethnology Bulletin 109.
- McGee, W. J.

 1894 The Siouan Indians: A Preliminary Sketch. Bureau of
 American Ethnology Annual Report 15:157-212.
- McGimsey, Charles Robert III

 1964 A Report on the Quapaw in Arkansas Immediately Prior to the

 Treaty of 1818. Report submitted to the Quapaw Tribal Council.
- Moore, C. B.
 1908 Certain Mounds of Arkansas and of Mississippi. Part 1: Mounds and Cemeteries of the Lower Arkansas River. Academy of Natural Sciences of Philadelphia Journal 13:448-557.
- Morse, Dan F., and Phyllis A. Morse
 1983 Archaeology of the Central Mississippi Valley. Academic Press,
 New York.
- Oklahoma Indian Affairs Commission. 1977 Ogaxpa. Quapaw Tribe of Oklahoma.
- Phillips, Philip
 1970 Archaeological Survey in the Lower Yazoo Basin, Mississippi,
 1949-1955. Peabody Museum of Archaeology and Ethnology Papers
 No. 60.
- Phillips, Philip, James A. Ford, and James B. Griffin

 1951 Archaeological Sruvey in the Lower Mississippi Alluvial Valley,

 1940-1947. Peabody Museum of Archaeology and Ethnology Papers

 No. 25.

- Rose, J. D., B. A. Burnette, M. S. Nassaney, and M. Blaeuer
 1983 Paleopathology and the Origins of Maize Agriculture in the
 Lower Mississippi Valley and Caddoan Culture Area. Ms. on
 file, Department of Anthropology, University of Arkansas,
 Fayetteville.
- Thomas, Cyrus
 1959 Quapaw. <u>Bureau of American Ethnology Bulletin</u> 30:333-336.
- Voeglin, Carl 1941 Internal Relationships of Siouan Languages. American Anthropologist 43:246-249.
- Wedel, Waldo
 1983 The Prehistoric Plains. In Jesse D. Jennings editor, Ancient
 North Americans, pp. 203-242. W. H. Freeman, San Francisco.
- Westbrook, Kent
 1982 Legacy in Clay: Prehistoric Ceramic Art of Arkansas. Rose,
 Little Rock.
- Williams, Stephen
 1980 Armorel: A Very Late Phase in the Lower Mississippi Valley.
 Southeastern Archaeological Conference Bulletin 22:105-109.

CHAPTER 4

TUNICANS WEST OF THE MISSISSIPPI: A SUMMARY OF EARLY HISTORIC AND ARCHAEOLOGICAL EVIDENCE

Marvin D. Jeter

Several recent publications have dealt with the aboriginal occupation of lands on the <u>east</u> side of the Lower Mississippi Valley by the Tunica or by an apparently related group, the Koroa. This paper summarizes the evidence for aboriginal Tunica and Koroa occupations <u>west</u> of the Mississippi River, in what is now eastern Arkansas and northeastern Louislana, during late prehistoric and Protohistoric times. Three sets of evidence are used: 1) the accounts of the De Soto expedition of 1541-1542; 2) the accounts of the <u>earliest</u> French explorers, from 1673 to 1700; and 3) archaeological data from the Bartholomew-Macon region of southeastern Arkansas and nearby regions on both sides of the Mississippi. The combined evidence suggests that the Tunica and/or Koroa aboriginally occupied the southeastern quadrant of Arkansas and adjacent portions of northeastern Louislana, and possibly had done so for at least several hundred years before the De Soto <u>entrada</u>. They appear to have been displaced southward by the Quapaw during the late 1500s and early 1600s, and to have left Arkansas between 1650 and the early 1700s.

Several recent publications by Brain (1977, 1978a, 1979, 1981, 1982), a dissertation by Brown (1979), and a volume edited by Galloway (1982a) have dealt with aboriginal occupations of lands on the <u>east</u> side of the Lower Mississippi Valley by the Tunica or by an apparently related group, the Koroa. This paper summarizes the evidence for aboriginal Tunica and Koroa occupations west of the Mississippi River, in what is now eastern Arkansas and northeastern Louisiana, during late prehistoric, Protohistoric, and earliest historic times.

Three sets of eyidence are used: 1) the accounts of the De Soto expedition of 1541-1542; 2) the accounts of the earliest French explorers, from 1673 to 1700; and 3) archaeological evidence from the Bartholomew-Macon region of southeastern Arkansas and nearby regions on both sides of the Mississippi. Here several disclaimers are in order. The only original research I have conducted is archaeological, in southeastern Arkansas. With regard to De Soto's adventures near the Mississippi River and their correlation with the archaeological record, I will summarize relevant portions of the versions of Brain et al. (1974), plus the implications of an alternative version proposed by the Morses (P. Morse 1981:61ff; Morse and Morse 1983), and will resurrect a controversial speculation from the older literature (Phillips et al. 1951:390; Swanton 1911, 1939). As for De Soto's subsequent encounters with aboriginal groups in Arkansas, I will draw upon a recent article by Dickinson (1980). I am also heavily dependent upon Dickinson's researches (1980 and personal communications) for information on the earliest French explorers in Arkansas and northern Louisiana.

Marvin D. Jeter, Arkansas Archeological Survey, P.O. Box 1249, Fayetteville, AR 72702-1249

A further caveat is necessary. I have already gone on record (Jeter 1982a:113-115) expressing doubts about any necessary or consistent correlations between archaeological units such as phases or mortuary ceramic complexes and ethnographic units such as tribes. As a wise man ("Chief" Dan George, in "Little Big Man") once put it, "Sometimes the magic works, and sometimes it doesn't." I would not go as far as Binford and Sabloff (1982:144), who recently asserted that there is no equivalence between culture traits and specific ethnically or politically defined units; there may be varying degrees of correlation, and individual cases must be evaluated on their own merits.

The approximate locations of several "provinces" and Indian groups contacted by De Soto are shown in Figure 4.1. Just before De Soto crossed the Mississippi in the late spring of 1541, he encountered the native "province" of Quizquiz. Brain (1977, 1978a, 1979, 1981, Brain et al. 1974) has asserted that the occupants of this province were Tunica, on the basis of two lines of ethnohistoric evidence: 1) the men of Quizquiz were said to work in the maize fields, which corresponds to French descriptions of Tunica practices some 150 years later and 150 km to the south; and 2) historic Chickasaw and Choctaw traditions placed "Tunica old fields" near Friar's Point, just west of Clarksdale, Mississippi, which is Brain's suggested location for Quizquiz-Tunica. Brain et al. (1974:256ff) also noted the presence of a number of late sites in the Clarksdale vicinity, but did not provide a detailed discussion of artifactual evidence. The artifacts of this region. especially ceramics, deserve much additional scrutiny. I am not aware of any occurrences of Winterville Incised, var. Tunica or of the "Tunica mode" which Brain (1979:224) has stated "seems to have been an ethnic peculiarity" of documented Tunica assemblages dating 150 to 200 years after De Soto. Instead, the late ceramics from Coahoma County, Mississippi which have been studied by Belmont (1961) and Brown (1978) appear to resemble Quapaw phase assemblages.

Upon crossing the Mississippi, De Soto encountered the province of Aquixo, which Brain (1978a:311; Brain et al. 1974:267) asserts was related to or identical with Quizquiz. By Brain's criteria, then, both Quizquiz and Aquixo would be Tunica. The Morses (P. Morse 1981:61ff, Morse and Morse 1983:306ff) disagree with Brain on the location of De Soto's crossing, arguing instead for the Commerce Landing location that was preferred by Phillips et al. (1951:384ff), and have not expressed a published opinion on the ethnic identity of Quizquiz or Aquixo. Here I will only remark that if they are right about the crossing location, but Brain is still right about the ethnicity of these provinces, then the Tunica would have been present in extreme northwestern Mississippi, and in northeastern Arkansas nearly opposite the Tennessee-Mississippi line, in the early to middle 1500s.

From Aquixo, De Soto traveled northward to the province of Casqui, for which Brain (1978:311-312) claims a "positive correlation" with the Kent phase, whereas the Morses identify it with the Parkin phase. From Casqui, De Soto marched farther northward and invaded the rival province of Pacaha, which Brain (1978:312) identified as the Walls phase, whereas the Morses suggest that Pacaha is represented by the Nodena phase.

All agree that Pacaha was the dominant province, and there has been periodic speculation that it may represent the Quapaw (or Arkansas) intrusion from the north. Much of this is based on the somewhat

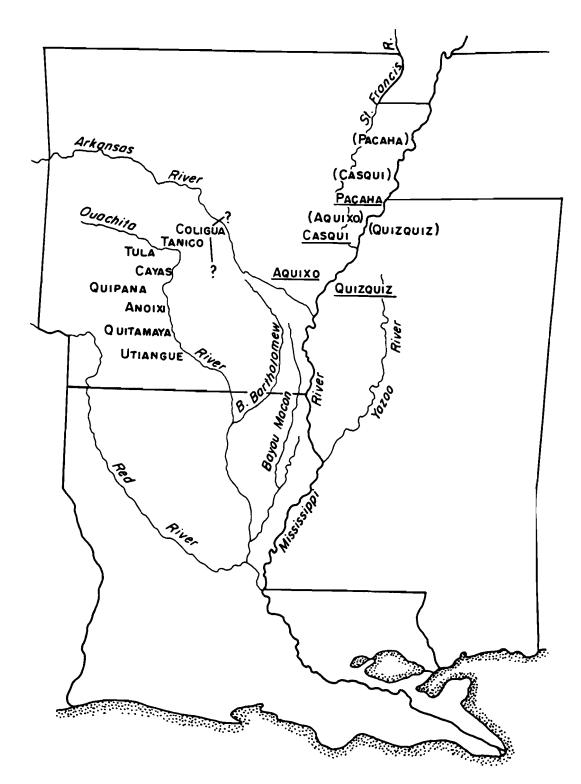


Figure 4.1. "Provinces" and Indian groups contacted by De Soto in 1541-1542. The underlined names are approximately in the locations suggested by Brain et al. (1974). The names in parentheses are approximately in the alternative locations suggested by Morse and Morse (1983). The remaining names are approximately in the locations suggested by Dickinson (1980).

unreliable Garcilaso, who rendered "Pacaha" as "Capaha", which closely resembles the "Kappa" (or "Cappa") rendering of "Quapaw" by the French some 150 years later at the mouth of the Arkansas River. Swanton (1911:186) originally favored this identification, but changed his mind (1939:51-52). Phillips et al. (1951:420) considered it, but rejected it. Yet, Brain et al. (1974:276-277) "lean(ed) toward" the Pacaha= Capaha=Cappa=Quapaw equation. I must confess a tendency to agree, especially if the Morses are right about the Pacaha=Nodena phase equation. Certain resemblances between Nodena phase and Quapaw phase artifacts, such as Nodena points, red and white painted vessels, and effigy bowls, are at least suggestive.

Neither the Morses nor Brain et al. have suggested an ethnic identity for the province of Casqui. Phyllis Morse, who equates Casqui with the Parkin phase, has conjectured that "The Parkin phase preference for making ceramics on a (coarse) Neely's Ferry paste rather than (fine) Bell Plain (favored by the Nodena and Walls phases) is probably a tribal difference..." (1981:67), but she did not speculate further about which tribes might have been involved. Here, I will only remark in passing that according to Brain (1979:224ff) and Brown (1979:254), coarse shell-tempered ware predominated at documented French contact sites of the Tunica and related groups.

As De Soto moved southwestward through Arkansas, he encountered a province whose name was recorded as Coligua. Dickinson (1980:4) agrees with Swanton's (1911:33) suggestion that "Coligua" may have been a mispronunciation of "Koroa" by De Soto's Muskhogean informants, who would have substituted an "1" sound for the "r" sound. Swanton (1939; 1946:54) suggested that Coligua had been located around Little Rock, but Dickinson (1980:4-5) suggests a location slightly to the south, in the Ouachita drainage.

The next De Soto province, Tanico, was in the vicinity of hot waters and salines. Dickinson (1980:1-2) follows Swanton and the early French map-makers in asserting confidently that De Soto's "Tanico" was equivalent to Tunica, and that the location must have been in the Ouachita Valley near the present Hot Springs, Arkansas. This is perhaps the most definite identification, and the northwesternmost location, for any historic encounter with a Tunican group in Arkansas.

De Soto's "Tula" were believed by Swanton (1939:54) to have been Caddoan, but Dickinson (1980:2-4) suggests they may have been Wichita intruders from the Plains into the Caddo Gap area. De Soto was told about, but missed contact with, a group called Cayas, who were allied with the Tanico and lived slightly farther down the Ouachita Valley. Dickinson (1980:2,7-8) suggests that the Cayas of De Soto's time may have been the Cahinnio, a probably Caddoan group who were contacted by the French in the Ouachita Valley in the late 1600s and 1700s.

The remaining groups contacted by De Soto in Arkansas (Quipana, Anoixi, Quitamaya, and Utiangue), were conjectured by Swanton (1939:54) to have had Natchezan affiliations, rather than Caddoan, and Dickinson (1980:4) agrees, at least in the case of Utiangue. This was a recently abandoned and possibly stockaded village, where De Soto's men spent the winter of 1541-1542. It has never been relocated, but is believed to have been near Camden or Calion and close to the Ouachita River. With regard to the possible Natchezan connections of these groups, it is at least worth mentioning that the recently-discovered Minet journal manuscript (Galloway 1982b:16-17), which deals with La Salle's 1682

expedition down the Mississippi, documents close contacts between the Natchez and Koroa. Brain (1982:50ff) uses this and other documents to argue that the Natchez, Koroa, and other groups had already become "a hybrid group" before French contact. Swanton (1911:33) tentatively classed the Koroa as speakers of a Tunican language, and they are therefore regarded as "Tunicans" for the purposes of this paper, but as noted by Boas (1948) and many others, there is no necessary connection between language and cultural affiliations.

Some 131 years after De Soto, in 1673, Jolliet and Marquette (Figure 4.2) led the first French expedition into the Lower Valley, traveling southward as far as the mouth of the Arkansas River before turning back. At that southernmost point, they made the first definite contact with the "Akansea" (or Arkansas, or Quapaw). They also were told of other people living up in the Arkansas Valley to the west, and recorded their names on crude maps. DeVorsey (1982:65-67, Fig. 2) has published a partial tracing of a map made by Jolliet, which shows, among others, the "Akoroua" located well to the west of the Mississippi and slightly south of the Arkansas River. The famous "Marquette map" (Phillips et al. 1951: Figure 71) names eight groups in this vicinity, among them the "Akoroa" well away from the Mississippi, and the "Tanik8a" a short distance southwest of the mouth of the Arkansas. These would appear to have been the Koroa and Tunica.

As documented by Galloway (1982b), the La Salle expedition of 1682, down the Mississippi to its mouth, did not venture inland west of the river into Arkansas, but did find the "Tonica" and others living near the mouth of the Yazoo River, and the Koroa closely associated with the Natchez (Figure 2; see also Brain 1982). However, remnants of both the Tunica and Koroa appear to have remained well to the west of the Mississippi, and as far north as southern Arkansas, for several more years, if not decades.

In 1687, Henri Joutel and five other survivors of La Salle's Texas expedition crossed southern Arkansas from the Great Bend of the Red River to the mouth of the Arkansas (Figure 4.3). They left the Caddo villages on the Red River and visited the Cahinnio on the way to the Arkansas-Quapaw settlements (Dickinson 1980:6-7). The Cahinnio, perhaps the descendants of De Soto's Cayas, are believed to have inhabited the Ouachita Valley; it has been suggested (Hodges and Hodges 1945:99) that Joutel met them near Arkadelphia, but Dickinson (1980:6) argues that the actual location was downstream, in the Camden vicinity. Joutel was told of, but did not visit, a friendly "Tonica" settlement about one day's journey (about 10 leagues or 48 km) down the river (Dickinson 1980:7-8). This location would still have been well within present-day Arkansas, in what is now known as the Felsenthal archaeological region (Schambach 1981).

Another spin-off from the La Salle adventure in Texas was the 1690 expedition of Henri de Tonti, who went from his Arkansas Post to the Caddo villages in the Great Bend and back by a more southerly route. He traveled by water at the beginning, going down the Mississippi several leagues, leaving it apparently via a flooded crevasse, and according to Faye (1942:11) and Dickinson (1980:5), probably entering Bayou Macon above modern Lake Village, Arkansas. From there, he sent an expedition some 6 leagues (about 30 km) to the west, to a Koroa settlement, which appears to have been somewhere near Bayou Bartholomew, north of the Arkansas-Louisiana line. On their way back from Texas they again

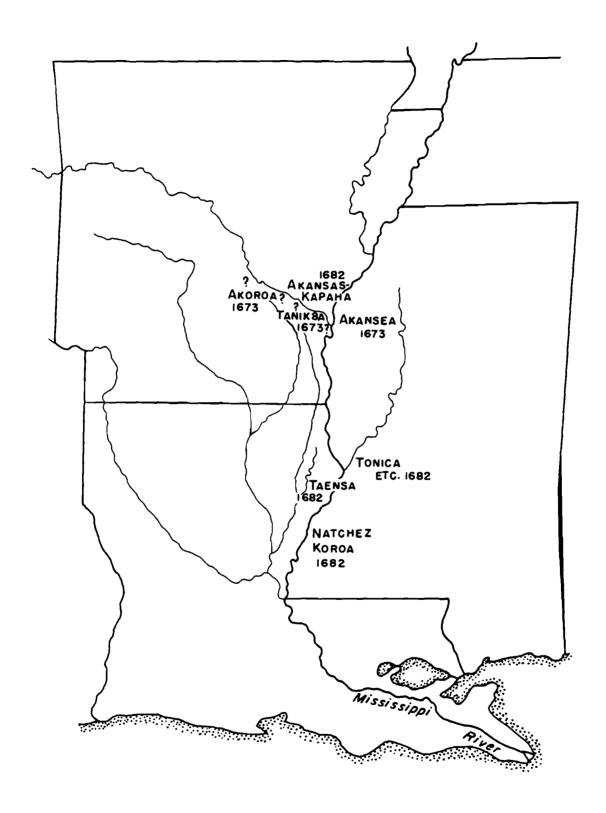


Figure 4.2. Approximate locations of Indian groups contacted or recorded by Jolliet and Marquette in 1673, and by La Salle in 1682.

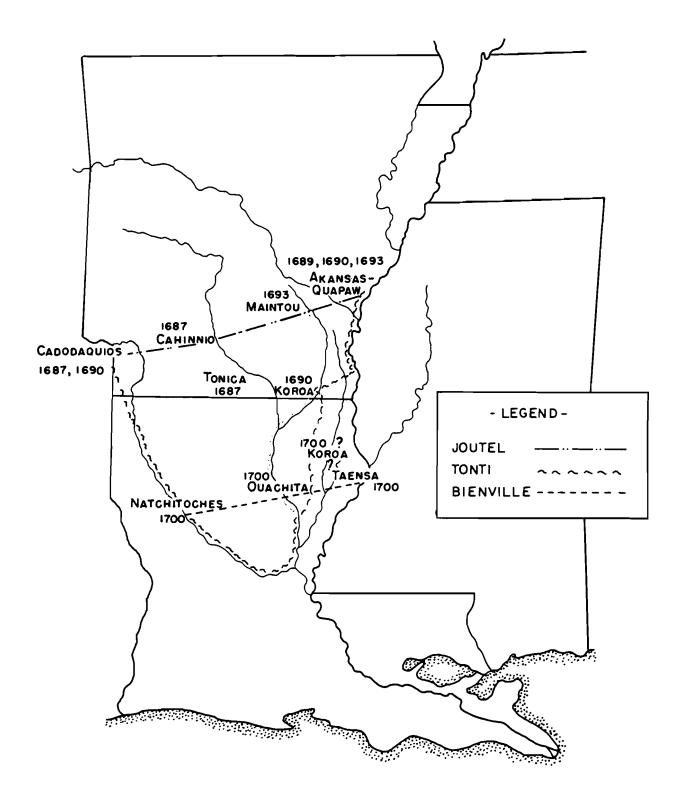


Figure 4.3. Approximate locations of Indian groups contacted or recorded by Joutel in 1687, Tonti in 1690 and 1693, and Bienville in 1700.

stopped at the Koroa settlement (Dickinson 1980:5-6). Dickinson (1980:5) states that French explorers of this period referred to Bayou Bartholomew as "the River of the Koroas" (cf. also Swanton 1946:147).

One additional early French explorer is worth mentioning for documentation of the Koroa west of the Mississippi, though not necessarily still in Arkansas. In 1700, Bienville went from the Taensa settlement near Lake St. Joseph, Louisiana, to visit the Natchitoches along the Red River (Figure 4.3). His guide told him that there was a Koroa settlement up one of the streams they crossed. This may have been Bayou Macon in northeastern Louisiana (Dickinson 1980:5), and their presence in this vicinity does not rule out the possibility that they or other Koroa (or Tunica) may have still been living in or exploiting the resources of southeastern Arkansas.

Bienville's journey also is noteworthy for documenting a Caddoan group, the Ouachitas, living along the river that now bears their name, in Louisiana well to the south of the Arkansas line. It should be emphasized here that none of these early accounts document any Caddoan group in either the Bartholomew-Macon or Felsenthal regions of the Lower Mississippi Valley archaeological area in either Arkansas or Louisiana.

Various French maps published in the early 1700s, as Galloway (1981) and others have noted, tend to lag a decade or more behind the explorers, and present a palimpsest rather than a true picture at any given time.

Summing up the "close encounters" of the Spanish and earliest French explorers with the Tunica and Koroa west of the Mississippi, a somewhat sparsely documented but consistent pattern emerges. "Close encounters of the Tunica kind" (Figure 4.4) may have occurred near or above the mouth of the St. Francis River in 1541; apparently did occur near Hot Springs in the same year; occurred 132 years later, in 1673, near the mouth of the Arkansas: and despite the presence of Tunica on the Lower Yazoo by 1682, there appears to have been a remnant Tunica group in the Ouachita Valley of southern Arkansas as late as 1687. "Close encounters of the Koroa kind" (Figure 4.5) may have occurred near present-day Little Rock in 1541; along the Lower Arkansas River in 1673; and despite the presence of Koroa peoples near Natchez in 1682, some Koroa were reportedly settled near Bayou Bartholomew in southeastern Arkansas in 1693, and there appears to have been a remnant Koroa group in northeastern Louisiana, if not southeastern Arkansas, as late as 1700. The overall pattern is completely consistent with Brain's suggestion that the Tunica were pushed southward by the Quapaw, and it is also of interest that the earliest French reports on both sides of the Mississippi (Dickinson, personal communication 1982; Galloway, personal communication 1982) state that the Tunica and Quapaw were enemies, although they later became more friendly.

The late prehistoric, Protohistoric, and early Historic archaeological record (Figure 4.6) is also consistent with an interpretation of occupation of southeastern Arkansas and northeastern Louisiana by the Tunica, Koroa, and/or related groups. Brain (1977:1ff, 1979:224) has noted that the Tunica were culturally, and particularly ceramically, in the Mississippian tradition. The Koroa have not been subjected to direct historically documented archaeology, but despite the cautions mentioned earlier, at least a beginning prediction of the nature of a Koroa assemblage might start with the probability of similarity to that of the Tunica, because they probably spoke a Tunican

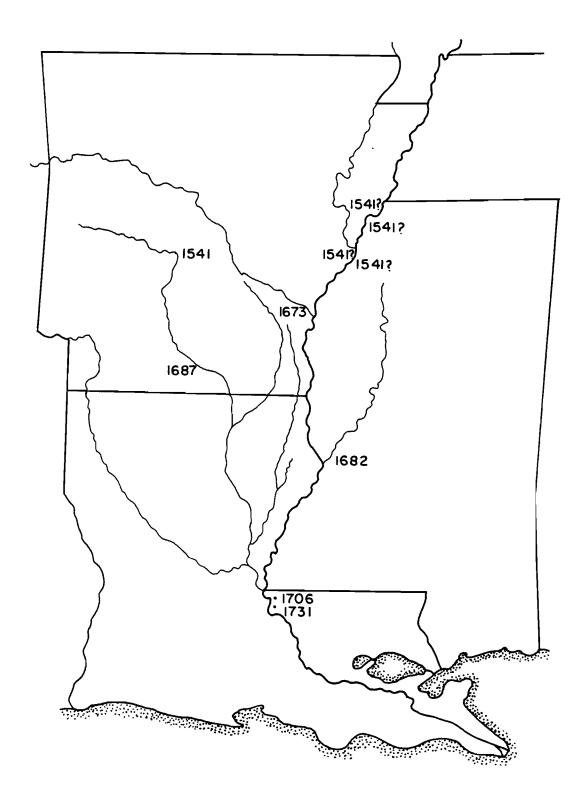


Figure 4.4 "Close encounters of the Tunica kind": a chronological summary of approximate locations.



Figure 4.5. "Close encounters of the Koroa kind": a chronological summary of approximate locations.

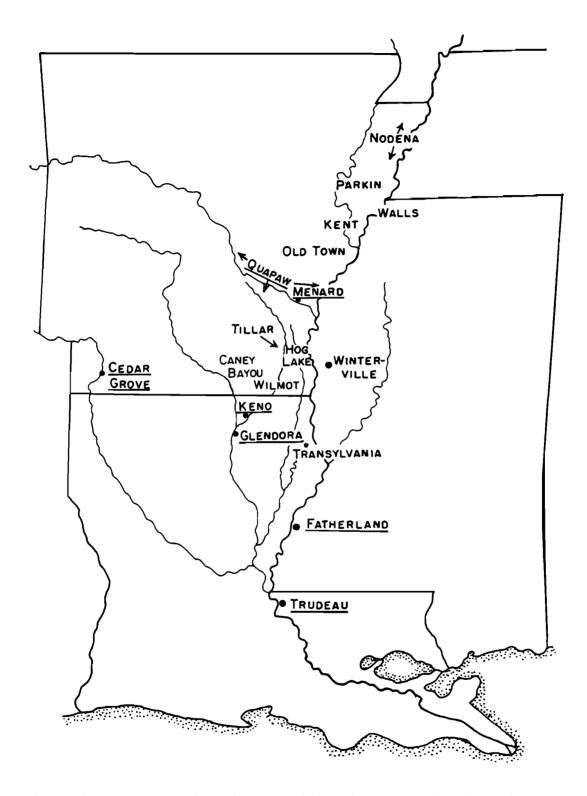


Figure 4.6. Late prehistoric, Protohistoric, and early Historic archaeological sites and phases. The underlined names indicate sites or phases which have produced evidence of Historic period (post-1700) occupation.

language (Dickinson 1980:4; Swanton 1911:33) and lived near the Tunica. One might also expect much evidence of interaction with the Natchez, at least for late Protohistoric and Historic Koroa assemblages, because the Natchez and Koroa appear to have become very closely associated by 1682 (Brain 1982:50ff). There also should be evidence of interaction with Caddoan groups to the west, especially if De Soto's Tanico and Cayas, and Joutel's Tonica and Cahinnio, represent Tunicans and Caddoans. In any event, the Tunica had a long tradition of going westward into Arkansas and Louisiana to obtain salt, and would have been in frequent contact with Caddoans as a result (Brain 1977:8, 1979:280-282). Koroa contacts with Caddoans appear to be poorly documented, but may be inferred from general proximity and from occasional remarks such as that of Tonti, who in 1690 obtained a Caddoan quide for an overland trip from the Great Bend of the Red River to a Koroa settlement (Dickinson 1980:5). Finally, there should be evidence in both Tunica and Koroa assemblages of interaction with the Quapaw, despite the probability of a generally unfriendly relationship. By later Protohistoric and Historic times, the Quapaw appear to have become adept at assimilating remnants of other groups (Dickinson and Dellinger 1940, 1963:17; Phillips 1970:943), which suggests that something less than all-out warfare was going on.

Shell tempered pottery, as a dominant mode of manufacture, seems to have spread slowly southward down the Lower Mississippi Valley in late prehistoric times. This may have been an example of technological diffusion rather than population movement; Hally (1972:624-625) noted that there appeared to have been a simultaneous slow northward spread of "southern" decorative techniques and designs. At any rate, shell tempering became dominant in southeastern Arkansas around A.D. 1400, but only by around the 1500s in the Transylvania phase of northeastern Louisiana and the Caney Bayou phase of the Felsenthal region (Jeter 1982a:107; Hally 1972:606; Rolingson and Schambach 1981:193ff). My own surveys and others in southeastern Arkansas (e.g., Hemmings 1982: Table 25) suggest some continuity between so-called "Plaquemine" occupation before A.D. 1400 and so-called "Mississippian" occupation after A.D. 1400, as evidenced by small habitation sites with varying proportions of grog and shell tempered ceramics present.

My own research (Jeter 1980, 1982a:103-110,120-121; 1982b, Jeter et al. 1979) has focused on the Tillar and Hog Lake Protohistoric mortuary complexes or phases, on Bayous Bartholomew and Macon respectively. I have described these elsewhere, and will present only a very brief summary here, with emphasis on the Tillar complex. At least five Tillar sites and two Hog Lake sites appear to have been charnel houses containing the remains of more than 50 individuals each. The first excavation, a century ago in 1882 by Edward Palmer and his artist-assistant H. J. Lewis, encountered a mass burial; others have found both rows of extended burials and bundle reburials.

I have studied nearly 200 ceramic vessels from these sites, now in musuems such as the Smithsonian Institution and the Gilcrease Museum and in local private collections. Virtually all of the mortuary ceramics are shell tempered. The most common body decorations are variants of Winterville Incised designs such as festoons (Plate 4.1A), imbrications (Plate 4.1B), concentric circles connected by parallel lines (Plate 4.1C), and the guilloche (Plate 4.2A).

Brain (1979:224, 236-237) has defined the "Tunica mode" as one to four horizontal rows of punctations between the rim and the body



Plate 4.1. Winterville Incised vessels from Protohistoric sites in southeastern Arkansas. A - Jar with festooned body decoration (cf. var. Winterville) and punctations below lip (cf. "Tunica mode"), from Austin site (3-Dr-50), in Birch collection at Arkansas Archeological Survey's UAM Station (AAS negative number 71265); B - Jar with imbricated body design (cf. var. Ranch) and punctations below lip (cf. "Tunica mode"), in Gooch collection, Dumas, AR (AAS neg. no. 796780) C - Bottle with concentric circles and parallel lines (var. unspecified), from Tillar Farms site (3-Dr-30), in Lemley collection (V-1578) at Gilcrease Institute, Tulsa (Gilcrease no. 5425.2537) (AAS neg. no 694134).

Note: Scale: All artifacts in this and the following plates are shown approximately half size.



Plate 4.2. Bottles with punctations below lip (cf. "Tunica mode") from Protohistoric sites in southeastern Arkansas.

A - Winterville Incised, var. unspecified (cf. Belzoni), from Tillar site (3-Dr-1), in Palmer collection at Smithsonian Institution (SI no. 71258) (AAS neg. no. 782435); B - Winterville Incised or Leland Incised, in Gooch collection, Dumas, AR (AAS neg. no. 796788); C - Leland Incised, var. unspecified, Gooch collection, Dumas, AR (AAS neg. no. 796770).

decoration, and stated that it may be an "ethnic peculiarity." Similar, but not identical, rows of punctations are present on the necks and rims of numerous Winterville Incised jars from Tillar sites (Plates 4.1A, 4.1B), and at the rims of a few bottles as well (Plates 4.2A, 4.2B, and 4.2C). Brain (1979:234-235) also defined a carelessly incised Tunica variety of Winterville Incised on the basis of vessels from the mideighteenth century Trudeau site. A few vessels from Tillar sites (Plates 4.3A and 4.3B) resemble this style (in particular, cf. Plate 4.3A and Brain 1979:235, Vessel P-50).

Both the "Tunica mode" and <u>Tunica</u> variety may be relatively late Protohistoric developments. They have apparently not been reported at the Winterville site, which was abandoned around 1500 (Brain 1978b:352, 355-356, Table 12.1), nor at any sites of the De Soto period in the Clarksdale vicinity, which is Brain's suggested location for his "Quizquiz-Tunica" (cf. Belmont 1961; Brown 1978). The punctations on the "Tillar complex" vessels appear generally more neatly executed and arranged than those on the Trudeau vessels illustrated by Brain (1979), and the latter are generally lower on the neck; these attributes may have chronological significance.

As for their cultural significance, I would question the apparent circular reasoning inherent in naming artifact varieties and modes after ethnic groups. It may be instructive that Ford's (1936:101ff, Figures 19 and 20) "Tunica complex" which included "marker types" (actually, rim modes, later called the "Tunica rim" and "Haynes Bluff rim" by Phillips 1970:278-280, 558, 564-565, Figures 99-101, 201 and 214) did not match the (probably) historic Tunica mortuary ceramics found at Angola Farm (Ford 1936:140; cf. Phillips 1970:433), and that neither of these rim modes appears to be present in the larger (69 vessels) assemblage from the Trudeau site, identified by Brain (1979:224ff) as basically of historic Tunica manufacture.

Tillar and Hog Lake sites have produced several "saucers" with interior incised decorations (Plates 4.3C and 4.3D; cf. Jeter et al. 1979: Figure 8C). Some of these have Tunica mode-like punctations around the inner rim; Brain (personal communication 1981) states that these vessels resemble an unpublished and un-named variety of Winterville Incised that was found at the Protohistoric Haynes Bluff site.

Another common body decoration on Tillar and Hog Lake ceramics is a connected spiral, scroll, or guilloche motif, often involving a central circle or dot and sometimes bounded above and below by incised lines or punctations in an arcade pattern (Plates 4.2C and 4.4A-D; cf. Jeter et al. 1979: Figures 4b and 4c). Most of these vessels would probably be typed as Leland Incised or Cracker Road Incised (the shell tempered equivalent of Fatherland Incised; Brown 1979), possibly indicating Natchezan relationships. Some Tillar vessels with this body pattern have neck punctations resembling the "Tunica mode" (Plate 4.4B), and a few are pedestaled in the Natchezan fashion (Plate 4.4C; cf. Neitzel 1965: Figures 19 and 20). Several of the vessels (e.g., Plates 4.2B, 4.2C, and 4.4B) have designs which appear intermediate between Winterville Incised and Leland Incised. One (Plate 4.4C) also resembles the Protohistoric to Historic Owens Punctated, var. Menard (Phillips 1970:149-150). One (Plate 4.4D) bears a Leland-like festoon motif above a Cracker Road-like design.

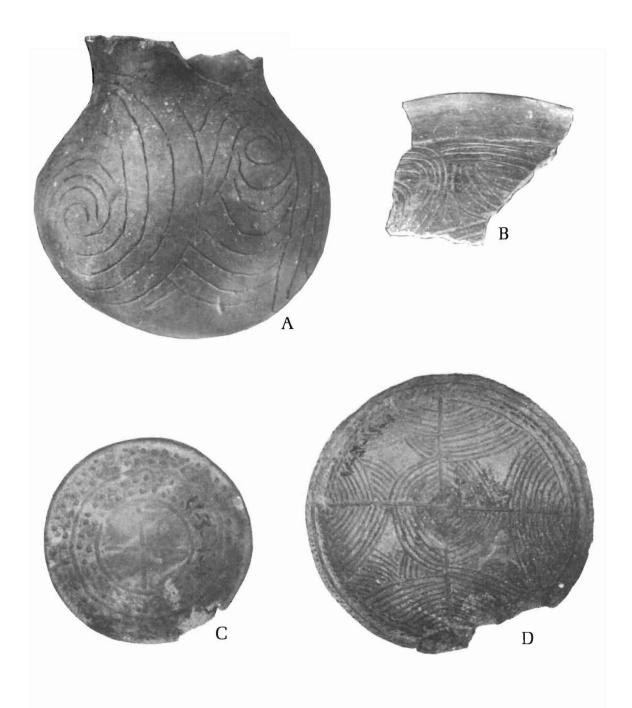


Plate 4.3. Possibly very late variants of Winterville Incised from Protohistoric sites in southeastern Arkansas. A - Jar (cf. var. Tunica), in Gooch collection, Dumas, AR (AAS neg. no. 796793); B - Rimsherd from "helmet" bowl (cf. var. Tunica), from McClendon site (3-Dr-144), in Appleby collection at AAS-UAM Station (AAS neg. no. 812982); C and D - "Saucers" (var. unspecified) with punctations below lip (cf. "Tunica mode"), Gooch collection, Dumas, AR (AAS neg. nos. 803560 and 803554).



Vessels from the Tillar Farms site (3-Dr-30), southeastern Plate 4.4. Arkansas, with attributes suggesting "Natchezan" or other late Protohistoric to Historic relationships. All are in the Lemley collection at the Gilcrease Institute, Tulsa. A - Jar with connected spiral motif (Leland Incised, var. unspecified; V-1690; 5425.2536; AAS neg. no. 694124); B - Jar with quilloche around central circles, punctated arcade borders, and punctations around neck (cf. "Tunica mode") (Winterville Incised or Leland Incised; V-1712; 5425.2532; AAS neg. no. 694130); C - Jar with pedestaled base and connected scroll design (cf. Cracker Road Incised or Owens Punctated, var. Menard; V-1711; 5425.2533; AAS neg. no. 694148); D - Jar with Winterville-like incised festoons above quilloche around central circles (cf. Winterville or Cracker Road Incised) and diagonal punctations or short incisions on neck (cf. necks on Foster Trailed-Incised vessels) (V-1925; 5425.2543; AAS neg. no. 694143).

Ceramics from these sites also include occasional examples of the "northern" types Barton Incised (e.g., Plate 4.5A) and Parkin Punctated. Mississippi Plain vessels are common, and both plain and decorated vessels are frequently sooted on their exteriors, suggesting that they had utilitarian functions (Hally 1983) before being used as mortuary offerings. White (1970:7-10) and Schambach and Rolingson (1981:195) have noted the occurrence of sooting on Protohistoric mortuary vessels from the adjacent Felsenthal region.

There are also several Tillar and Hog Lake vessels which resemble Protohistoric or Historic Quapaw phase ceramics, at least with regard to certain attributes. One is a Wallace-like incised effigy bowl (Plate 4.5B). There are at least two untyped incised bottles (e.g., Plate 4.5C) with "hourglass" necks resembling those commonly found on painted Quapaw phase bottles (cf. Ford 1961: Figures 16h-i, 19a-b), and a few bowls which resemble the "helmet" shape (Plate 4.3B; Jeter 1980, n.d.; cf. Ford 1961: Figure 150-r). However, the "teapot" vessel form, which has been found with European trade goods at Quapaw sites (Ford 1961:171, Figures 14 and 18a-f) and at the Fatherland site (Neitzel 1965:44, Figure 21o), has not been found on Tillar or Hog Lake sites.

Several vessels resembling late prehistoric or Protohistoric Caddoan types have been found at Tillar and Hog Lake sites. These include several engraved bottles (e.g., Plate 4.6A) and a Cowhide Stamped jar (Plate 4.6B). The fully historic Caddoan type Natchitoches Engraved has not been found, however, although it has been found on Quapaw sites to the north (Ford 1961:179, Figure 20m) and at several historic sites to the south (Moore 1909; Neitzel 1965:47, Plate 11a; 1983:95-96; Brain 1979:245). Also, no examples of the Late Protohistoric to Historic type Keno Trailed have yet been found at these sites, although a few vessels with swollen "spool" necks like those found by Moore (1909) at Keno and Glendora are known (e.g., Plate 4.6C). (See below for further discussion of Keno and Glendora.)

Other Tillar - Hog Lake artifacts include shell tempered elbow pipes (Plate 4.6D-F), Gulf Coast shell pendants, shell ear pins (cf. Brain 1979:252), shell beads, rare hoes of Mill Creek chert from southern Illinois, and possibly a barbed, stemmed arrow point type (cf. White 1970:15-16, Figure 16). The subsistence pattern (on the basis of unanalyzed remains from several sites) appears to have been diverse; the settlement pattern was apparently dispersed and based on small farmsteads, organized into "rural communities" with at least one integrative focus being mortuary ceremonialism.

Looking again at the "big picture", the Hog Lake and Tillar complexes began to flourish in the 1400s, during the decline of the Winterville center across the Mississippi; there is some evidence for continuity with previous occupations of the Bartholomew-Macon region, such as the Bartholomew phase (Rolingson 1976), and perhaps as far back as the Coles Creek period (House and Jeter n.d.). In the 1500s, population appears to have dropped off markedly in northeastern Arkansas after the De Soto entrada (Morse 1982), but the Quapaw phase on the Lower Arkansas probably began shortly thereafter and continued well into the 1700s, as attested by ethnohistoric accounts and archaeological investigations (Ford 1961). At least some of the Hog Lake sites were occupied into the 1500s, and some of the Tillar sites well into the 1600s. Previously (Jeter 1982b) an ending date of about 1650 had been estimated for the Tillar complex, due to the lack of European trade



Plate 4.5. Vessels with attributes suggesting "northern" or Quapaw phase (Late Protohistoric to Historic) relationships, from sites in southeastern Arkansas. A - Barton Incised, var. unspecified, jar from Tillar site (3-Dr-1), in Palmer collection at Smithsonian Institution (SI no. 71269) (AAS neg. no. 782452); B - Wallace or Winterville Incised (cf. var. Belzoni) effigy bowl from Tillar Farms site (3-Dr-30) in Lemley collection (V-1926) at Gilcrease Institute, Tulsa (no. 5425.2519) (AAS neg. no. 694158); C - Untyped incised bottle with "hourglass" neck, from Austin site (3-Dr-50), in Birch collection at AAS-UAM Station (AAS neg. no. 712170).

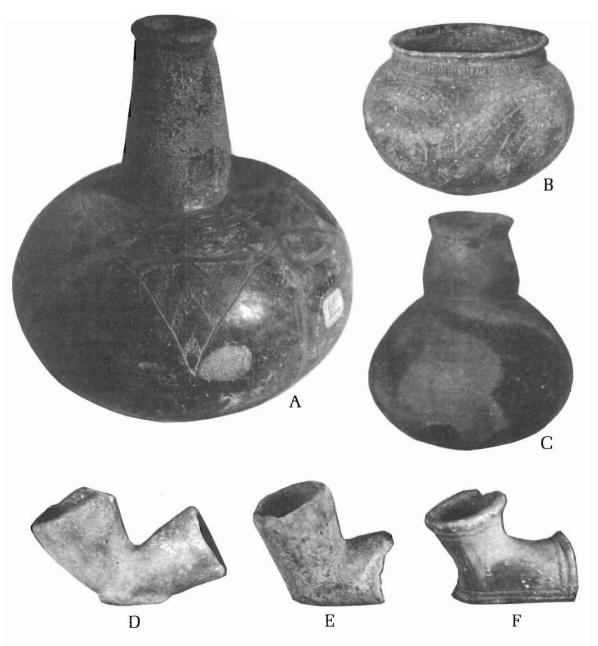


Plate 4.6. Vessels with attributes suggesting "Caddoan" relationships, and pipes, from Protohistoric sites in southeastern Arkansas. A - Untyped bottle with engraved chevron motif, from Tillar site (3-Dr-1), in Palmer collection at Smithsonian Institution (SI no. 71257) (AAS neg. no. 782436); B - Cowhide Stamped jar, from Tillar Farms site (3-Dr-30), in Lemley collection (V-1715) at Gilcrease Institute, Tulsa (no. 5425.2502) (AAS neg. no. 694160); C - Mississippi Plain bottle with "spool" neck, from Tillar Farms site (3-Dr-30), in Lemley collection (V-1927) at Gilcrease Institute (no. 5425.2512) (AAS neg. no. 694164); D, E, F - Pipes from Tillar site (3-Dr-1), in Palmer collection at Smithsonian Institution (SI nos. 71235, 71254 and 71255) (AAS neg. no. 782447).

goods or fully historic aboriginal ceramics. However, in June, 1983, a relic collector claimed to have found several copper or brass and iron artifacts with one burial at a mortuary site in the Tillar locality, suggesting that at least some occupation continued into the late 1600s, if not later. To the south and west of the Tillar complex, the probably related Transylvania and Caney Bayou phases represent occupations during the 1500s and 1600s, although no trade goods have been reported (Schambach and Rolingson 1981:193ff; Hally 1972; cf. White 1970).

The Keno and Glendora sites in northeastern Louisiana have been used in the past (e.g., by Phillips 1970:861) to suggest "Caddoan" affiliations for this region and adjacent southeastern Arkansas, largely on the basis of Moore's (1909:32ff,131ff) illustrations of ceramic vessels. However, a recent survey in this region and a re-examination of Moore's non-illustrated ceramics by Belmont (1981) suggests that "a Mississippian complex, not a Caddoan one, succeeds the Plaguemine" throughout this region, and that the Glendora phase is at most a brief historic Caddoan intrusion. Dickinson (1982 personal communication) and Webb and Gregory (1978:29) have suggested that Keno and Glendora may represent a Koroa (or Tunica) settlement with Caddoan trade connections; as noted above, a Caddoan group, the Ouachitas, were encountered farther down the Ouachita Valley by Bienville in 1700. Recent surveys and excavations in adjacent southeastern Arkansas have further demonstrated the non-Caddoan nature of the late prehistoric and Protohistoric remains of the Bartholomew-Macon and Felsenthal regions (Rolingson 1976:99-101; Schambach 1981:103-106).

In summary, the combined ethnohistorical and archaeological lines of evidence are in substantial agreement, in support of the proposition that "Tunicans" (including the Tunica and/or the Koroa) were the principal occupants of the southeastern quadrant of Arkansas and adjacent portions of northeastern Louisiana, possibly for several hundred years before the De Soto entrada. They appear to have been displaced southward by the Quapaw during the late 1500s and early 1600s, and to have left Arkansas between 1650 and the early 1700s.

ENDNOTE

 $^{
m 1}$ During the interval between the writing and publication of this paper, Charles Hudson has restudied the De Soto documents and suggested a new reconstruction of the route of the entrada in Arkansas. He has recently published a "brief synopsis" (Hudson 1985), which has been contested by Dickinson (1986). The differences probably will not be resolved soon. The major points of Hudson's version (see his 1985: Figure 1 map) that are relevant to the present paper are as follows: First, Hudson's locations for Quizquiz, the first crossing of the Mississippi, Aquixo, Casqui and Pacaha are closer to the Morses' version than to that suggested by Brain. Second, his location for Coliqua is on the White River, where it emerges from the Ozarks, far to the northnortheast of previously suggested locations; he has made no ethnic association for Coligua. Third, his location for Tanico (ethnicity unspecified) is on the Arkansas River at or near Carden Bottom (cf. Hoffman's paper in this volume), well to the north of previously suggested Hot Springs. Fourth, Hudson (1985:7) suggests that De Soto's 1541-1542 winter camp at Autiamque (Utiangue) was one of the large Quapaw phase sites downstream from Little Rock (again, cf. Hoffman's paper). Fifth, he suggests that De Soto's army did not leave Arkansas

after that winter, but explored within the state, including the southeastern portions, possibly contacting both Hog Lake and Tillar phase peoples (Hudson 1985:8-9).

Acknowledgements. I appreciate the contributions of Frieda Odell-Vereecken, who drafted the figures; Jane Kellett, who processed the photographs for the plates; and Joyce Abney, who typed the earlier versions of this paper.

REFERENCES CITED

Belmont, John S.

- The Peabody Excavations, Coahoma County, Mississippi, 1901-1902. Bachelor's Honors thesis, Department of Anthropology, Harvard University, Cambridge.
- A Reconnaissance of the Boeuf Basin, Louisiana. Paper presented at the 38th Annual Meeting of the Southeastern Archaeological Conference, Asheville.
- Binford, Lewis R., and Jeremy A. Sabloff
 1982 Paradigms, Systematics and Archaeology. Journal of
 Anthropological Research 38:137-153.
- Boas, Franz 1948 Race, Language, and Culture. Macmillan, New York.
- Brain, Jeffrey P.
 - 1977 On the Tunica Trail. Louisiana Archaeological Survey and Antiquities Commission Anthropological Study No. 1.
 - 1978a The Archaeological Phase: Ethnographic Fact or Fancy? In Robert Dunnell and Edward S. Hall, Jr. (editors),

 Archaeological Essays in Honor of Irving B. Rouse, pp.
 307-314. Mouton, The Hague.
 - 1978b Late Prehistoric Settlement Patterning in the Yazoo Basin and Natchez Bluffs Regions of the Lower Mississippi Valley. In Bruce D. Smith (editor), Mississippian Settlement Patterns, pp. 331-368. Academic Press, New York.
 - 1979 <u>Tunica Treasure</u>. Peabody Museum of Archaeology and Ethnology Papers No. 71.
 - Tunica Archaeology. In F. H. West and R. W. Neuman (editors), Traces of Prehistory: Papers in Honor of William G. Haag, pp. 43-50. Geoscience and Man Vol. 22. School of Geoscience, Louisiana State University, Baton Rouge.
 - LaSalle at the Natchez: An Archaeological and Historical Perspective. In Patricia K. Galloway (editor), LaSalle and his Legacy: Frenchmen and Indians in the Lower Mississippi Valley, pp. 49-59. University of Mississippi Press, Jackson.

- Brain, Jeffrey P., Alan Toth, and Antonio Rodriguez-Buckingham
 1974 Ethnohistoric Archaeology and the DeSoto Entrada into the
 Lower Mississippi Valley. Conference on Historic Site
 Archaeology Papers 1972 Vol. 7:232-289.
- Brown, Ian
 1978 An Archaeological Survey of Mississippi Period Sites in
 Coahoma County, Mississippi. Manuscript on file,
 Cottonlandia Museum, Greenwood.
 - 1979 Early 18th Century French-Indian Culture Contact in the Yazoo Bluffs Region of the Lower Mississippi Valley. Unpublished Ph.D. dissertation, Department of Anthropology, Brown University, Providence.
- DeVorsey, Louis Jr.
 - The Impact of the La Salle Expedition of 1682 on European Cartography. In Patricia K. Galloway (editor), La Salle and his Legacy: Frenchmen and Indians in the Lower Mississippi Valley, pp. 60-78. University of Mississippi Press, Jackson.
- Dickinson, Samuel D.
 - 1980 Historic Tribes of the Ouachita Drainage System in Arkansas. The Arkansas Archeologist 21:1-11.
 - The River of Cayas, the Ouachita or the Arkansas River? Arkansas Archeological Society Field Notes 209:5-11.
- Dickinson, Samuel D., and Samuel C. Dellinger
 1940 A Survey of the Historic Earthenware of the Lower Arkansas
 Valley. Texas Archaeological and Paleontological Society
 Bulletin 12:76-96.
- Faye, Stanley
 1942 The Forked River. Louisiana Historical Quarterly 25:917-942.
- Ford, James A.
 - Analysis of Indian Village Site Collections from Louisiana and Mississippi. Louisiana Geological Survey Anthropological Study No. 2.
 - Menard Site: The Quapaw Village of Osotouy on the Arkansas River. American Museum of Natural History, Anthropological Paper 48:133-191.
- Galloway, Patricia K.
 - Historic Tribes in the Yazoo Basin During the French Colonial Period. In Samuel O. Brookes, Cultural Resources along the Yazoo River from Greenwood To Vicksburg, Mississippi, Appendix. U.S. Army Corps of Engineers, Vicksburg District.
 - (Editor) <u>LaSalle and His Legacy: Frenchmen and Indians in the Lower Mississippi Valley</u>. University of Mississippi Press, Jackson.

- Sources for the La Salle Expedition of 1682. In Patricia K. Galloway (editor), La Salle and His Legacy: Frenchmen and Indians in the Lower Mississippi Valley, pp. 11-40.
 University of Mississippi Press, Jackson.
- Hally, David J.
 - The Plaquemine and Mississippian Occupations of the Upper Tensas Basin, Louisiana. Unpublished Ph.D. dissertation, Department of Anthropology, Harvard University, Cambridge.
 - 1983 Use Alteration of Pottery Vessel Surfaces: An Important Source of Evidence for the Identification of Vessel Function. North American Archaeologist 4:3-26.
- Hemmings, E. Thomas
 - Human Adaptation in the Grand Marais Lowland: Intensive
 Archeological Survey and Testing in the Felsenthal Navigation
 Pool, Ouachita and Saline Rivers, Southern Arkansas.
 Arkansas Archeological Survey Research Series No. 17.
- Hodges, Dr., and Mrs. T. L. 1945 Suggestion for Identification of Cer
 - Suggestion for Identification of Certain Mid-Ouachita Pottery as Cahinnio Caddo. Texas Archeological and Paleontological Society Bulletin 16:98-116.
- House, John H., and Marvin D. Jeter
 - n.d. Boydell: A Late Prehistoric Ceremonial Center and Community in Southeast Arkansas. Arkansas Archeological Survey, Research Series, in preparation.
- Hudson, Charles
 - 1985 De Soto in Arkanss: a Brief Synopsis. Arkansas Archeological Society Field Notes 205:3-12.
- Jeter, Marvin D.
 - 1980 Edward Palmer's 1882 Excavation at the Tillar site (3-DR-1), Southeast Arkansas. Paper presented at the 37th Annual Meeting of the Southeastern Archaeological Conference, New Orleans.
 - The Archeology of Southeast Arkansas: An Overview for the 1980s. In Neal L. Trubowitz and Marvin D. Jeter (editors), Arkansas Archeology in Review, pp. 76-131. Arkansas Archeological Survey Research Series No. 15.
 - 1982b The Protohistoric "Tillar Complex" of Southeast Arkansas.
 Paper presented at the 47th Annual Meeting of the Society for American Archaeology, Minneapolis.
- Jeter, Marvin D., David B. Kelley, and George P. Kelley
 1979 The Kelley-Grimes Site: A Mississippi Period Burial Mound,
 Southeast Arkansas, Excavated in 1936. The Arkansas
 Archeologist 20:1-51.

- Moore, Clarence B.
 - Antiquities of the Ouachita Valley. <u>Journal of the Academy</u> of Natural Sciences of Philadelphia 14:7-170.
- Morse, Dan F.
 - Northeast Arkansas in the 15th Century. Paper presented at the 39th Annual Meeting of the Southeastern Archaeological Conference, Memphis.
- Morse, Dan F., and Phyllis A. Morse
 1983 Archaeology of the Central Mississippi Valley. Academic Press,
 New York.
- Morse, Phyllis A.

 1981 Parkin: The 1979 Archeological Investigations of a Cross
 County, Arkansas Site. Arkansas Archeological Survey
 Research Series No. 13.
- Neitzel, Robert S.
 - Archeology of the Fatherland Site: The Grand Village of the Natchez. American Museum of Natural History, Anthropological Paper 51:1-108.
 - The Grand Village of the Natchez Revisited: Excavations at the Fatherland Site, Adams County, Mississippi, 1972.

 Mississippi Department of Archives and History Archaeological Report 12.
- Phillips, Philip
 - Archaeological Survey in the Lower Yazoo Basin, Mississippi, 1949-1955. Peabody Museum of Archaeology and Ethnology Papers No. 60.
- Phillips, Philip, James A. Ford, and James B. Griffin
 1951 Archaeological Survey in the Lower Mississippi Alluvial Valley,
 1940-1947. Peabody Museum of Archaeology and Ethnology
 Papers No. 25.
- Rolingson, Martha Ann
 1976 The Bartholomew Phase: A Plaquemine Adaptation in the
 Mississippi Valley. In Charles E. Cleland (editor), Cultural
 Change and Continuity: Essays in Honor of James Bennett
 Griffin, pp. 99-119. Academic Press, New York.
- Rolingson, Martha Ann, and Frank F. Schambach
 1981 The Shallow Lake Site (3UN9/52) and its Place in Regional
 Prehistory. Arkansas Archeological Survey Research Series
 No. 12.
- Schambach, Frank F.

 1981 A Description and Analysis of the Ceramics. In Martha A.
 Rolingson and Frank F. Schambach, The Shallow Lake Site
 (3UN9/52) and its Place in Regional Prehistory, pp. 101-176.
 Arkansas Archeological Survey Research Series No. 12.

- Schambach, Frank F., and Martha Ann Rolingson
 - 1981 Conclusions. In Martha Ann Rolingson and Frank F. Schambach,
 The Shallow Lake Site (3UN9/52) and its Place in Regional
 Prehistory, pp. 177-203. Arkansas Archeological Survey
 Research Series No. 12.
- Swanton, John R.
 - Indian Tribes of the Lower Mississippi Valley and Adjacent Coast of the Gulf of Mexico. Bureau of American Ethnology Bulletin
 - Final Report of the United States DeSoto Expedition Commission. 76th Congress, 1st Session, House Document No. 71.
 - The Indians of the Southeastern United States. Bureau of American Ethnology Bulletin 137.
- Webb, Clarence H., and Hiram F. Gregory
- 1978 The Caddo Indians of Louisiana. Louisiana Archaeological
 Survey and Antiquities Commission Anthropological Study No. 2.
- White, Patsy 1970 I
 - 1970 Investigation of the Cemetery at the Gee's Landing Site, 3DR17. The Arkansas Archeologist 11:1-20.

CHAPTER 5

PROTOHISTORIC SETTLEMENT PATTERNS IN NORTHEASTERN MISSISSIPPI

Jay K. Johnson and John T. Sparks

Data from recent cultural resource management surveys, earlier excavations, and ethnohistorical accounts are combined to provide a detailed picture of Chickasaw and Protohistoric settlement. These sites are situated at the edge of prairies near stream bottoms which contain relatively coarse sediments. This pattern is distinct from that of the previous Mississippian occupation and appears to have preceded historic contact. The Chickasaw settlement system was already in place when De Soto passed through this region.

Jennings (1941), working around Tupelo in preparation for construction on the Natchez Trace Parkway, demonstrated the importance of the Black Prairie in Chickasaw settlement. Recent work in the Black Prairie (Atkinson 1979; Johnson and Curry 1984; Johnson et al. 1984; Marshall 1973a, 1983; Solis and Walling 1982; Sparks 1984; Stubbs 1982, 1983) has provided data on settlement outside the Tupelo area. This paper will summarize current information on the distribution of Protohistoric sites throughout the Black Prairie. The shift in settlement strategy which occurred between Middle Mississippian and Protohistoric in the middle portion of the study area will serve as a starting point.

The Black Prairie in Mississippi is one of a set of distinct linear physiographic zones which were formed by near shore deposition at the edge of the Mississippian Embayment during Cretaceous times (Stephenson and Monroe 1940). The nature of the deposits varied with the nature of the coastline. During periods when large, high energy rivers drained into the embayment, sands were deposited. Clays resulted when the stream gradients were reduced and chalks were the result of marine growth along shallow, calm shorelines. The Demopolis Chalk underlies the Black Prairie and is bounded throughout most of its length in Mississippi by the Eutaw Sands on the east and the Ripley Sands on the west. Because they are relatively impermeable, the chalk strata have eroded to a rolling plain while the sands, where rain water soaks in rather than runs off, are higher and more rugged.

Studies of the original land survey notes (Johnson et al. 1984; Stubbs 1983) show the prairies to have been forested in scrub oaks and hickory on the deep soils, with cedar glades and grass lands occurring in the areas where the underlying chalk comes close to the surface. The Ripley Sands portion of the Pontotoc Ridge to the west of the Prairie was covered with oak-hickory forest, while the Eutaw Sands supported mixed stands of oak and pine to the east. These data correspond nicely with

Jay K. Johnson, Center for Archaeological Research, University of Mississippi, University, MS 38677.

John T. Sparks, 606 S. Church Street, Tupelo, MS 38801

other evaluations of forest cover for the physiographic zones in Mississippi (Kuchler 1964; Lowe 1911; USDA 1958).

CLAY COUNTY

One of the largest data sets which includes the Black Prairie is the Clay County survey conducted by John Connaway and Sam Brookes of the Mississippi Department of Archives and History in 1979. They collected and recorded 233 sites located throughout the county. John Sparks (1984) analyzed this material in his master's thesis research. Sparks also collaborated on the Line Creek survey which was done in preparation for several small, Soil Conservation Service reservoirs in the western two thirds of Clay County, including a portion of the western edge of the Black Prairie (Johnson et al. 1984). The combined Clay County and Line Creek sample consists of 318 sites spread throughout the county representing everything from Paleoindian to Protohistoric. These data have also been used in an analysis of Woodland period settlement strategy (Johnson n.d.).

Except for a small number of test pits excavated during the Line Creek survey, the sample is represented entirely by surface collections. Site distributional data depends, therefore, on the identification of components in mixed collections. There is some difficulty in distinguishing Protohistoric and Mississippian components in Clay County since there is little change in artifact types. To the north, Chickasaw pottery is easily identified on the basis of the use of fossil shell as a tempering agent. In the south part of Clay County, live shell tempering appears to continue up until the contact period. There are a few fossil shell tempered sherds from the north part of the county which serve to reinforce the identification of Protohistoric assemblages in the area. Lacking a distinctive change in temper, Protohistoric components have been defined entirely on the basis of a distinctive set of rim modes (Stubbs 1982). Primary among these is a triangular notched fillet located one or two centimeters down from the rim of the pot. Nodes and vertical applique strips located near the rim also occur. the latter, there is a resemblance to Alabama River Applique, a late type in northwestern Alabama (Jenkins 1981).

Perhaps the most remarkable aspect of Protohistoric settlement in Clay County is the nearly complete lack of continuity from the preceding Mississippian period. Only one of the 28 Protohistoric components in the Clay County sample was found in a site which also contains Mississippian sherds (Table 5.1). In fact, the Protohistoric settlement pattern is

Table 5.1. Component Cross Tabulation.

	Mississippian	Protohistoric
Mississippian	55	1
Protohistoric	1	27

much different from that of any of the preceding phases; all but three of the Protohistoric sites are single component. In contrast, only five of the 56 Mississippian site collections contain exclusively Mississippian material.

Some of the differences between Mississippian and Protohistoric settlements are evident when the distribution of the components across the physiographic zones is considered (Table 5.2). Most of the Mississippian components are located in the Black Prairie. All but one of the Protohistoric components are found in that zone. However, when stream order (Table 5.3) and soil association (Table 5.4) are reviewed, it is evident that the Mississippian population is using the Black Prairie in a much different way than the Protohistoric inhabitants.

Table 5.2. Physiographic Distribution of Components.

	Mississippian	Protohistoric
North Central Hills	0	0
Flatwoods	0	0
W. Pontotoc Ridge	2	1
E. Pontotoc Ridge	$ar{f 1}$	0
Black Prairie	50	28
Tombigbee Bluffs	3	0
Tombigbee Bottoms	Ō	Ö

Table 5.3. Stream Order Distribution of Components.

	Mississippian	Protohistoric	
1st Order	0	0	
2nd Order	2	21	
3rd Order	11	0	
4th Order	7	0	
5th Order	3	6	
6th Order	32	1	

The majority of the Mississippian components are located on Tibbee Creek, the only sixth order stream in the survey area. The primary soil associations for the Mississippian sites are the Leeper-Griffith soils of the Prairie and the Ora-Prentiss-Longview soils. The latter association is dominated by soils on the broad Pleistocene terraces to the north of Tibbee Creek. The Mississippian pattern clearly emphasizes the major river bottoms in the area.

Table 5.4. Soil Association Distribution of Components.

	Mississippian	Protohistorio
Bottom Soils		
Pontotoc Ridge	2	0
Prairie	22	0
Tombigbee River	3	0
Upland Soils		
' Thick Prairie	8	9
Thin Prairie	0	17
Pontotoc Ridge	1	0
Flatwoods	6	0
Pleistocene Terrace	14	2

Bruce Smith (1978), in his summary of a set of papers on Mississippian settlement, stresses the importance of the "energy subsidy" provided by flooding in major river bottoms. This is critical to Mississippian subsistence directly because of the renewal of soil fertility and indirectly because the enriched floodplain can support a larger natural biomass to be exploited in hunting, fishing, and collecting. In fact, Smith (1978:486) proposes that adaptation to a floodplain habitat be a critical part of the definition of the term "Mississippian." He goes on to note that the amount of energy renewal can be roughly measured in stream flow. It follows, therefore, that major stream bottoms should be the primary settlement locations during the Mississippian period.

Clearly, the Mississippian settlement in Clay County conforms with the expectations of the standard conception of Mississippian. Just as clearly, Protohistoric settlement does not. Only one of the Protohistoric components is located on a sixth order stream. The large majority were found on the small second order streams high in the headwaters of the Prairie tributaries of Tibbee Creek (Table 5.3). The shift in settlement is likewise evident in terms of soil association (Table 5.4). More than half of the Protohistoric sites are located on the Binnsyille-Chalk outcrop-Demopolis association. This pattern is exclusive to the Protohistoric components. None of the components from other time periods in the Clay County sample are found on these soils. All of the soils in the Binnsville-Chalk outcrop-Demopolis association are found on the uplands of the Black Prairie. They are distinguished from other upland Prairie soils in the amount of soil above the chalk. Protohistoric sites are located on or near soils which are relatively thin.

Kuchler (1964) and Lowe (1911) reconstructed the Black Prairie vegetation to be cedar glades in places where the soil overlying the chalk is thin. The land survey data do not include cedar, perhaps because of its unsuitability as a witness tree (Bourdo 1956). However, there are several mentions of prairie in the 1834 notes. A study of the

original land survey notes for a section of Black Prairie in Alabama (Jones and Patton 1966) noted a correspondence between shallow soils and prairies. The same land survey also recorded cedar, albeit in small numbers. It seems likely, therefore, that the soils of the Binnsville-Chalk outcrop-Demopolis association supported cedar glades and prairies in the Clay County survey area. In fact, cedars and sedge grass grow on most of the Protohistoric sites in Clay County.

The connection between thin prairie soils, cedar glades and Protohistoric sites may be significant in reconstructing prehistoric subsistence strategies. Wildlife biologists (Segelquist and Green 1968), studying deer browse in Arkansas, tabulated the amount of available food in each of four forest types: upland hardwood, upland pine hardwood, cedar glade, and stream bottom hardwood. Cedar glades in their study area are located on thin soils near limestone outcrops. In Arkansas, stream bottom hardwoods are the primary foraging locality for deer during the spring and summer. Cedar glades with their open grassy areas provide the second most favorable warm weather habitat. During the winter, the location of the deer population depends on mast yield. When the acorn crop is good, the upland hardwoods provide the most abundant source of food. When the acorn crop fails, the deer move to the cedar glades where they feed on the cedar, the only evergreen foliage in the area which the deer will eat.

In Clay County, it appears that Protohistoric settlement is situated to take advantage of two plant communities; bottomland hardwood and cedar glades/prairie. According to the Arkansas study, the bottoms are the primary warm weather habitat for deer and the cedar glades/prairie are the second best habitat. During the cold months, the bottoms are the third best deer habitat while the cedar glades are the second best. The glades are the primary winter habitat when the mast crop fails. There is the implication that Protohistoric settlement represents a reemphasis on deer hunting as a major subsistence source. Protohistoric sites are strategically located in terms of optimal year round access to major deer habitat.

Protohistoric settlement in Clay County is almost exclusively a Black Prairie phenomenon. It is distinctive in terms of site setting. In the three prairie reservoirs of the Line Creek project, nearly every ridge top which extended into the bottom was covered with cedars, grass, and Protohistoric material. Most of these sites contained exclusively Protohistoric material. Earlier sites were located lower on the slopes of the bottoms, usually on the terraces. One other aspect of the Line Creek survey data needs to be discussed. Settlement density in the Prairie was higher than any other physiographic zone (Johnson et al. 1984: Table 3-6). That is, not only were the largest number of sites located in the prairie (29 sites), but the largest number of sites per area surveyed (24.68/square mile) occurs in the prairie reservoirs. More than half, 18, of the 29 prairie sites, are Protohistoric, yielding a site density of 15.33 per square mile for Protohistoric settlement. This is more than twice the settlement density for any other phase in the Line Creek survey (Johnson et al. 1984: Tables 3-7).

CHUQUATONCHEE CREEK

The University of Mississippi, Center for Archaeological Research conducted a second survey in the Black Prairie not long after the

completion of the Line Creek survey. Chuquatonchee Creek enters the prairie from the east in northern Chickasaw County and runs through the middle of the prairie until it joins with Line Creek in southern Clay County. All but one of the nine reservoirs surveyed in the Chuquatonchee project fall in the Black Prairie.

The survey provided a perfect opportunity to test the Line Creek results and the research proposal emphasized the Line Creek patterns. On the basis of the site density figures for the prairie reservoirs in Line Creek, it was predicted that 70 prehistoric sites would be located. Instead, only 16 were found. Further, it was predicted that most of the sites would be Protohistoric. While seven sites contained shell tempered sherds, only three were located in settings which fit the Protohistoric settlement model. Only one of these contained ceramics which, on the basis of rim modes, could be identified as Protohistoric (Johnson and Curry 1984).

The reservoir which contains the Protohistoric sites is one of two in the survey sample which drains into Chuquatonchee Creek from the west. This is the Pontotoc Ridge side of the drainage. All of the remainder of the reservoirs are located on the east side of the drainage, entirely within the Black Prairie. This suggests a possible explanation for the relative lack of sites in the Chuquatonchee sample. Since the Prairie zone is composed of generally thin soils lying over an impermeable chalk substratum, the Prairie streams tend to flow only during the wet weather. The Pontotoc Ridge, on the other hand, is composed of sands and clays which absorb rain water. The Soil Conservation Service provided streamflow classification data for several of the Chuquatonchee tributaries, and these data (Table 5.5) tend to support the idea that streams whose drainage includes a portion of the ridge carry more water. That is, although none of the Chuquatonchee tributaries are classified as permanent, the amount of ephemeral flow in the prairie is more than 10% higher than it is for streams whose drainage includes a portion of the Pontotoc Ridge.

Table 5.5. Stream Flow Classification, Chuquatonchee and Line Creek Watersheds.

Watershed	Number of Streams	Flow Cla Ephemeral	ssification Intermittent
Chuquatonchee Creek Prairie Drainage Ridge Drainage	8 9	18 17.5	15 22.5
Line Creek Prairie Drainage Ridge Drainage	1 2	3 5	8 19

The Line Creek streamflow data for the three survey streams which flow through the prairie are also informative (Table 5.5). In the first place, the streams are longer. More importantly, the portion of the total length which is classified as ephemeral is less than half that of the Chuquatonchee streams. Finally, the one stream, Long Branch Creek, which is located entirely within the Prairie, has a slightly higher proportion of ephemeral flow. It also contains the smallest proportion of Late Mississippian sites, 2 of 8 in contrast with 16 of 23 for the prairie portion of the other two streams.

It appears that one explanation for the general lack of sites in the Chuquatonchee drainage is the low streamflow of its tributaries. This recalls the proposal that the potential of a drainage in terms of Mississippian settlement can be measured, in part, in terms of streamflow (Smith 1978). The Mississippian emphasis on agriculture is the main reason that the fertile soils whose renewal depends on streamflow are preferred. The fact that streamflow seems to be a factor in Protohistoric settlement serves to underscore the likelihood that agriculture was an important part of the subsistence strategy of that period.

In addition to streamflow, soil texture is considered critical in the location of Mississippian settlement. Ward (1965) was the first to demonstrate this when he documented a correspondence between major site locations and soils in the silt loam texture class. Larson (1972) argued that these friable, easily worked soils were one of the limited resources which led to competition and centralization during Mississippian times. There is general agreement (Green and Munson 1978:317; Muller 1978:400; Price 1978:207) that soil type is the primary variable in predicting Mississipppian site location. Elevation and fertility, in addition to texture, are all considered important soil characteristics. Of course, these variables tend to correlate in major river bottoms. The highest elevations, the natural levees, are formed by the coarser sediments, and the same flooding which builds the levees rejuvenates the soils.

Therefore, if soil texture was a factor in the pattern of Protohistoric settlement, the Line Creek reservoirs which contain large numbers of sites should contain soils which are coarser than those in the Chuquatonchee Creek survey. A point counter was used to tabulate the soil type composition of each of the prairie reservoirs in the Line Creek and Chuquatonchee Creek surveys. Because the reservoirs are located in three counties and because the soil classifications differ in each of these counties, composite texture classes had to be developed. Fortunately, tables summarizing the engineering properties of the soils are included in each county report. These tables present soil texture data, which is quantified using graded screens (Table 5.6). The coarsest of the bottom soils is a silt loam. Silty clay loams are subdivided in Table 6 into a coarser group, silty clay loam 1, and a finer group, silty clay loam 2. The finest of the soils fall in the silty clay class.

More than half of the bottoms of the three Black Prairie reservoirs in the Line Creek survey contain soil types which fall into the two coarser soil classes (Table 5.7). None of the Chuquatonchee Creek reservoirs contain soils in these texture classes. All are more fine grained. Moreover, when the individual reservoirs within the Line Creek sample are considered, the reservoir with the finest soils, Reservoir

Table 5.6. Bottom Soil Texture Types.

Composite		Percentage Passing Sieve					
Texture Class	Soil Type	No. 10 (2.0mm)	No. 40 (0.42mm)	No. 200 (0.074mm)			
Silt Loam Beldon silt	t loam*	100	70-100	51-100			
Silty Clay Loam Leeper silt	n ty clay loam*	100	90-100	80-95			
	ty clay loam** ty clay loam**	100 100 95-100	95-100 95-100 95-100	85-95 85-95 85-95			
	lty clay loam** silty clay***	100 100	95-100	90-100 90-100			

^{*}Clay County; ** Chickasaw County; *** Monroe County

Table 5.7. Bottom Soil Texture Class Breakdown for Chuquatonchee and Line Creek Reservoirs (acres).

	Texture Class						
Reservoir	SL	SCL 1	SCL 2	SC			
Line Creek							
13	103	4	7				
14		258					
15		35	192				
Chuquatonchee Creek							
. 11			88	149			
12			36				
14				230			
18			173				
20			2	98			
21				166			
24			93				
28			41				

15, contains the fewest Protohistoric sites. However, all of the soils in Reservoir 20 of the Chuquatonchee Creek sample also fall in the silty clay class. This is the reservoir which produced the only surely Protohistoric artifacts in the Chuquatonchee sample.

There appears to be a correspondence between coarse bottom soils and Protohistoric settlement, although the correlation is not complete. Also, there is a correspondence between streamflow and Protohistoric settlement. Of course, in the Black Prairie these two are indirectly related. That is, streams which originate in the prairie are less apt to flow year round because the underlying chalk is impermeable. Likewise, because the upland soils in the prairie are derived from the fine grained chalks, the bottom soils are fine grained. Finally, there is a correspondence between the thin upland soils and Protohistoric occupation but, once again, not all of the Protohistoric sites are located on thin soils. However, these are the only sites which are known to occur on these soils.

Summarizing, the typical Protohistoric site setting in the Line Creek sample appears to be the tops of the low ridges and bluffs of the Prairie overlooking the small tributary streams that originate in the Pontotoc Ridge and drain out into the Prairie. These stream bottoms contain relatively coarse grained soils, suggesting that agriculture remains an important component of the subsistence system. They also carry more water than the streams whose drainage is contained entirely within the Prairie. This points toward agriculture, but larger amounts of water also would support a richer natural biota, including deer. These should have been better places to hunt and collect than the exclusively Prairie drainages. Likewise the location on the thin soils indicates a preference for the boundary between the cedar glades/prairie and the bottoms. Deer habitat studies suggest that this would be the optimal setting for a year around habitation which depended heavily on deer hunting.

All of this stands in contrast with the Mississippian emphasis on the broad terraces of the major streams. The only point of resemblance between the two settlement strategies is the apparent preference for silt loam bottom soils. Tibbee Creek, the sixth order stream bottom which contains most of the Mississippian sites, channels all of the Pontotoc Ridge drainage in Clay County across the Black Prairie into the Tombigbee River. The Protohistoric pattern can be interpreted to represent a deemphasis on intensive, large scale agriculture and a reemphasis on hunting. There is a concurrent decentralization. While most Mississippian sites are large enough to suggest several families are living together, most Protohistoric sites are too small to contain more than two or three houses. There is no evidence for mound building or the other indicators of the religious and political centralization which occurred during the preceding Mississippian period.

COMPARISONS

Settlement data on Protohistoric and Contact period sites elsewhere in northeastern Mississippi is confined almost exclusively to the Black Prairie. The one major exception is the Rolling Hills settlement, which is located north of Starkville in Oktibbeha County (Atkinson 1979). Survey and test excavation in that area have uncovered trade goods as well as a ceramic complex which shares some traits with the

Protohistoric and Chickasaw pottery to the north. Marshall (personal communication) has found this material to center around Starkville, extending to the west as far as the Porters Creek Clays of the Flatwoods and to the east as far as the Demopolis Chalk of the Black Prairies. Protohistoric and Contact period settlement in the area appears to be confined to that portion of the county which is underlain by Prairie Bluff Chalk. To the north, in Clay County, this formation makes up the western half of the Pontotoc Ridge. The Ripley Sands, which compose the eastern escarpment of the ridge, become narrow at about Line Creek. The primary difference between Prairie Bluff Chalk and Demopolis Chalk is the presence of lenses of sand and silt in the former. This means that the landscape is a little more rugged and the stream bottoms contain coarser soils than those flowing in the Demopolis derived soils. In fact, most of the streams around Starkville contain soils in the silt loam 1 class. Although thin upland soils and chalk blowouts are not as common on the Prairie Bluff Chalk as they are on the Demopolis Chalk, cedar glades are a common feature of the modern landscape. While it is not located in the Black Prairie proper, the Starkville settlement is centered on an area where the factors which are critical to Protohistoric settlement in Clay County come together. In fact, the only Protohistoric component in the Clay County sample which was not found on the Black Prairie was located on the Pontotoc Ridge, in the area underlain by Prairie Bluff Chalk (Table 5.2).

Most of the data on the transition from Mississippian to Protohistoric comes from Lyon's Bluff (22-0k-1), a fortified village located on the south side of Line Creek near the boundary between the Black Prairie and the Pontotoc Ridge (Marshall 1983, this volume). Marshall has identified material ranging from Early Mississippian to Protohistoric and related it to specific phases in the development of the site. Recent aerial photographs have shown the Protohistoric component at Lyon's Bluff to be larger and more regularly planned than had been thought. Actually, Lyon's Bluff is located at a strategic spot in terms of Protohistoric settlement. Most of the drainage in northeastern Mississippi is to the east, with major streams like Line Creek beginning at the edge of the North Central Hills and crosscutting all the physiographic zones between there and the Tombigbee River. Smaller streams flow primarily from north to south into the major streams. These major streams generally flow up against the south side of the stream valley, with the watershed for the next major drainage to the south beginning very near the south bluff line of the streams. This asymmetric drainage suggests a southward migration of the drainage systems, an interpretation which is supported by the location of large Pleistocene terraces primarily on the north side of the major west-east stream valleys (Stephenson and Monroe 1940: Plate 1B). Therefore, the upland prairie is closest to the silt loams of the Line and Tibbee Creek bottoms on the south side. According to Marshall (personal communication). Protohistoric settlement continues along the bluff line to the east from Lyon's Bluff.

Lyon's Bluff is located in extreme northern Oktibbeha County, separated from Clay County by Line Creek. There is a somewhat analogous physiographic setting directly to the north in Clay County where Houlka Creek comes out of the Pontotoc Ridge, flows across the Black Prairie, and joins Chuquatonchee Creek. Houlka Creek is the largest tributary of Chuquatonchee Creek and the largest of the Clay County sample

Protohistoric sites were located on the south bluff of the Houlka bottom during the 1979 Archives and History survey. Recent survey in the area (Ward, personal communication) indicates an extremely dense Protohistoric settlement.

The Yarborough site (22-C1-814) (Solis and Walling 1982) stands in contradiction to the south bluffs pattern. This is one of the few excavated and reported examples of a Protohistoric site in the area and, at least in terms of its location, it appears to be atypical. It is a relatively small multicomponent site which is situated on the north side of Tibbee Creek not far from its junction with the Tombigbee River. Its situation in the floodplain is paralleled by two other Protohistoric components which are located in the Line Creek bottoms on sites which also produced Mississippian material.

While most of the known Protohistoric occupation in Clay County is along the western edge of the Black Prairie near the boundary with the Pontotoc Ridge, Marshall's 1973 survey of a TVA transmission line between West Point and Amory (Marshall 1973b) provides important settlement data on the eastern edge of the Black Prairie. He recorded eight sites, four of which are relevant to this discussion. Three are small, Protohistoric sites containing fossil shell tempered sherds. The fourth is a relatively large site containing live shell tempered material. Marshall (1973a) interprets this to suggest a transition from the nucleated Mississippian period settlement on the major river bottoms to the dispersed Protohistoric settlement of the upland prairies. Examination of the regional geology (Stephenson and Monroe 1940) indicates that these sites are all situated within the Black Prairie on drainages which are contained within that zone. The county soil maps, however, indicate a fairly coarse soil in the bottoms, falling in the silty clay loam 1 range. That is completely within the range of variation which is characteristic of Protohistoric settlement to the The question is, where did these coarse sediments originate. A closer reading of the description of the Demopolis formation (Stephenson and Monroe 1940:96) suggests one possible explanation. This formation is not uniformly pure. It was originally differentiated into three members on the basis of the amount of sands and clays, with a relatively pure middle section bracketed by upper and lower sandier deposits. The upper division was later labeled as Prairie Bluff Chalk. Further north in Mississippi, the lower division becomes Coffee Sands. In Clay County, the two lower zones are not distinguished. However, the TVA transmission line sites fall within the lower division and the soil data suggest a similarity with the physical setting around Starkville. The Chuquatonchee Creek survey area with the relatively fine grained bottom soils and low site density falls in the middle zone.

Given the preceding discussion, it is easy to see why Tupelo became the center of Chickasaw settlement. All of the factors which seem to have been important during the Protohistoric come together in their optimal expression at that point. The central portion of the Demopolis Chalk becomes relatively narrow, with the modern city of Tupelo sitting on its eastern boundary. Large areas of prairie have been plotted in this zone using the original land survey notes (Stubbs 1983). Numerous large streams flow out of the Pontotoc Ridge east across this prairie zone, creating large bottoms filled with coarse textured soils. Those streams which originate in the Prairie, Tubbalubba and Kings Creek, contain finer sediments. If the pattern holds, there should be a lower

side density in these drainages. The large stream valleys show the asymmetric profile which is so evident in Line Creek to the south; they tend to flow up against the southern boundaries. Because of the size of their drainage, most of the streams are perennial. The archaeological record (Jennings 1940; Stubbs 1982, 1983) is clear: the Chickasaw made good use of this environment, establishing major settlements on the bluffs overlooking the Black Prairie bottoms.

CONCLUSIONS

The preference for cedar glades and prairie edges overlooking sandy stream bottoms appears to be a consistent pattern throughout northeastern Mississippi beginning with the Protohistoric up to and including the Chickasaw. The absence of sites from this period outside of the areas underlain by Demopolis Chalk or Prairie Bluff Chalk lends support to the proposed settlement model. If, as the deer habitat data and the dispersed settlement suggest, this pattern represents an emphasis on hunting, then Protohistoric subsistence can be viewed as a return to the diversified hunting, horticulture, and gathering subsistence of the Woodland stage. However, the addition of tropical cultigens to the system resulted in a major reorientation of the settlement strategy. The Protohistoric settlement pattern is no more like the Woodland pattern (Johnson n.d.) than it is like the Mississippian pattern. This is not to argue that the Mississippian period subsistence strategy did not rely heavily on hunting. Clearly it did (Smith 1975). However, on the basis of the settlement data, it seems likely that there was a greater dependence on hunting during the Protohistoric.

The Clay County data fills in the gap between the Mississippian and the Chickasaw in a geographic and chronological sense. Because of the emphasis on major stream bottoms. Mississippian sites are rare on the Tombigbee River above Columbus (Blakeman 1975; Rafferty 1980). The Line Creek/Tibbee Creek settlement is, in fact, the northernmost of a major group of Misssissippian sites in northeastern Mississippi. Not only does the Prairie settlement in Clay County occur north of Line Creek and south of Tupelo, there is good indication that it represents the transition from one period to the other. First, there is the Lyon's Bluff sequence (Marshall 1977) where Mississippian ceramics appear to develop into Protohistoric ceramics. Second, there are the Protohistoric ceramics themselves. They resemble Chickasaw ceramics in most aspects except temper. The use of live shell rather than fossil shell may represent a transition from Mississippian ceramics to Chickasaw or it may be geographic. Although fossil shell tempering occasionally occurs in the Historic period ceramics from the Starkville area to the south of Clay County, most of this material includes live shell (Atkinson 1979:63). Also, some of the Protohistoric sites in the Houlka drainage in northern Clay County contain a few sherds with fossil shell tempering.

Disregarding the chronological significance of temper, the complete absence of trade goods in the Clay County sites indicates a prehistoric placement. In that case, the transition from the Mississippian settlement pattern to the Protohistoric pattern appears to have been abrupt. Except for the Yarborough site (Solis and Walling 1982) and a few Protohistoric sherds on Mississipian sites in Line Creek, there is

no Protohistoric settlement on the Pleistocene terraces or in the Tibbee Creek bottoms, favorite Mississippian locations. Likewise, excepting one Late Mississippian site northeast of West Point (Marshall 1973a, b), Mississippian material is not found on the Prairie. The only area of significant overlap occurs along the south bluff of Line and Tibbee Creeks where Lyon's Bluff is located. As pointed out earlier, this is one of the few locations where the settlement requirements of the Mississippian and Protohistoric coincide.

Since the Protohistoric settlement pattern appears to represent a decentralization and simplification of the Mississippian pattern, it could be interpreted as the culmination of the general decline in social complexity which preceded contact throughout the Southeast. However, the Protohistoric Alabama River phase in Alabama is also viewed as a breakdown of the Mississippian system (Sheldon 1974; Curren 1984), and recent interpretations of the Alabama chronology (Sheldon and Jenkins 1983; Curren 1984) place the beginning of the Alabama River phase at the middle of the sixteenth century. Curren (1984:244-247) considers the Alabama River phase to have been the result of the disease and disruption brought by the De Soto expedition.

While there is good support for this argument in Alabama, the relationship between the De Soto entrada and the beginning of the Protohistoric is not that clear in Mississippi. In the first place, the De Soto accounts (Garcilaso 1951:397; Elvas 1922:100-102; Ranjel 1922:136-137) clearly indicate that Chicaza, the Chickasaw village where De Soto spent the winter of 1541, was located on the Black Prairie. Secondly, according to Garcilaso (1951:397) the expedition traveled for four days through level country in order to reach Chicaza after crossing what must have been the Tombigbee River. This area "though populated, contained only scattered villages."

It seems clear that Protohistoric settlement was already in place. This argument is possible in northeastern Mississippi since there is such a radical shift in settlement pattern. In Alabama, on the other hand, Protohistoric settlement strategy is interpreted to be a continuation of Mississippian settlement (Sheldon 1974; Curren 1984). Consequently, villages in Alabama as described in the DeSoto accounts offer no clue as to whether the Protohistoric had begun.

If the Clay County sites are prehistoric, then the Chickasaw settlement pattern must be viewed as a continuation of the Protohistoric pattern rather than a response to historic contact. The primary difference between the Clay County pattern and the Tupelo pattern is the higher settlement density around Tupelo. This aspect of the Chickasaw settlement may represent congregation in response to historic pressures. However, keep in mind that the Tupelo area is the optimal location for post Mississippian settlement as it is presently understood. In a sense, then, the Chickasaws were preadapted to the deerskin trade. This Protohistoric preference for settlement in areas where deer hunting as well as agriculture could be practiced put them in a position to earn a reputation as good hunters.

The Protohistoric shift in settlement is sometimes called the Mississippian Decline and, in terms of centralization as expressed in site size hierarchy and mound construction, the term is accurate. It is not altogether clear whether there was a decline in population. Although the Protohistoric sites are smaller, there may have been more of them. Protohistoric site density in the prairie reservoirs of Line

Creek is extremely high. However, because the sites are small and difficult to find and because most cultural resource management surveys have concentrated on the major stream bottoms, it is likely that the number of known Protohistoric sites is only a small proportion of the total population. It is uncertain how many sites would be found if a survey designed on the basis of the Protohistoric settlement model was conducted.

Finally, because of the radical shift in settlement strategy that occurred between the Mississippian and the Protohistoric in northeastern Mississippi, it would be misleading to rely heavily on Chickasaw ethnohistory in reconstructing Mississippian subsistence. It is perhaps because of the unique opportunities offered by the Black Prairies that the settlement reorientation is so obvious in this area. Still, throughout the Southeast it is unusual to find Protohistoric material on Mississippian sites. Surely similar discontinuity, albeit more difficult to detect, must exist elsewhere.

Acknowledgements. This paper relies heavily on the work of others. For the Line Creek data, we thank Jim Atkinson and Kim Curry, the field directors for the project. Kim secured landowner permission for the fieldwork and conducted the channel survey. He also conducted the Chuquatonchee Creek survey. Jim led the survey of the Line Creek reservoirs and did the ceramic analysis for that project. He was the first to recognize the Protohistoric settlement pattern in the reservoirs. Sam Brookes' and John Connaway's work in the Clay County survey and their generosity in providing the material and notes for Sparks' thesis are obviously essential to this paper. John Stubbs directed the Chickasaw Archaeological Survey during the time that the Line Creek analysis was being done. He provided his analysis sheets on the 1979 Clay County survey Protohistoric material. He also made a special trip to Oxford to help us with the Line Creek material. Rufus Ward analyzed the mostly twentieth century historic material from Line Creek and served as one of the many sounding boards for the ideas which are expressed in this paper. Of course, the major consultant by telephone and at regional meetings has been Dick Marshall. His earlier work and continued interest in the Black Prairie have provided the basis upon which our ideas grew. We thank all of these people.

REFERENCES CITED

Atkinson, James R.

A Historic Contact Indian Settlement in Oktibbeha County,
Mississippi. Journal of Alabama Archaeology 25:61-82.

Blakeman, Crawford H.

Archaeological Investigations in the Upper Central Tombigbee Valley: 1974 Season. Department of Sociology and Anthropology, Mississippi State University, Submitted to the National Park Service, Atlanta, Contract No. CX500041674. Copies available from Department of Sociology and Anthropology, Mississippi State University, Mississippi State.

- Bourdo, E.A.

 1956
 A Review of the General Land Office Survey and of its use in Quantitative Studies of Former Forests. Ecology
 37:754-768.
- Curren, C.

 1984 The Protohistoric Period in Central Alabama. Alabama
 Tombigbee Regional Commission.
- Elvas, Gentleman of
 1922 Relation. In Edward G. Bourne (trans.) Narratives of the
 Career of Hernando DeSoto, pp. 3-233. Allerton, New York.
- Garcilaso de la Vega
 1951 The Florida of the Inca, translated by John G. Varner and
 Jeannette J. Varner. University of Texas Press, Austin.
- Green, Thomas J., and Cheryl A. Munson
 1978
 Mississippian Settlement Pattern in Southwestern Indiana.
 In Bruce D. Smith (editor), Mississippian Settlement
 Patterns, pp. 293-330. Academic Press, New York.
- Hudson, C., M. T. Smith, and C. B. DePratter

 1984 The Hernando DeSoto Expedition: From Apalachee to Chiska.

 Southeastern Archaeology 3(1):65-77.
- Jenkins, Ned J.

 1981
 Gainesville Lake Area Ceramic Description and Chronology.
 The University of Alabama Office of Archaeological
 Research Report of Investigations No. 12.
- Jennings Jesse D.
 1941 Chickasaw and Earlier Indian Cultures of Northeast
 Mississippi. Journal of Mississippi History 3:155-226.
- Johnson, Jay K.

 n.d. Woodland Settlement in Northeast Mississippi: The Miller
 Tradition. In Robert C. Mainfort (editor), Middle Woodland
 Settlement and Ceremonialism in the Mid-South. University
 of Alabama Press, Tuscaloosa, in press.
- Johnson, Jay K., and H.K. Curry

 1984
 Final Report, Cultural Resources Survey in the
 Chuquatonchee Creek Watershed, Chickasaw, Clay, Monroe
 and Pontotoc Counties, Mississippi. Center for
 Archaeological Research, University of Mississippi,
 Submitted to Soil Conservation Service, Jackson,
 Mississippi, Contract No. 53-4423-3-439. Copies available
 from Center for Archaeological Research, University of
 Mississippi, University.

- Johnson, Jay K., H.K. Curry, James R. Atkinson, and John T. Sparks
 1984 Final Report, Cultural Resources Survey in the Line Creek
 Watershed, Chickasaw, Clay and Webster Counties,
 Mississippi. Center for Archaeological Research,
 University of Mississippi. Submitted to the Mississippi
 Soil Conservation Service, Jackson, Contract No.
 53-4423-2-314. Copies available from Center for
 Archaeological Research, University of Mississippi,
 University.
- Jones, A.S., and E.G. Patton
 1966 Forest, "Prairie", and Soils in the Black Belt of Sumter
 County, Alabama, in 1832. Ecology 47:75-80.
- Kuchler, A.W.
 1964
 Potential Natural Vegetation of the Conterminous United
 States. American Geological Society Special Publication
 No. 36.
- Lankford, G., III

 1977 A New Look at DeSoto's Route through Alabama. Journal of
 Alabama Archaeology 23(1):10-36.
- Larson, Lewis H., Jr.

 1972 Functional Considerations of Warfare in the Southeast During the Mississippian Period. American Antiquity 37:383-392.
- Lowe, E.N.
 1911 Soils of Mississippi. Mississippi State Geological
 Survey Bulletin No. 8.
- Marshall, Richard A.
 - 1973a Comment on the Mississippian Occupation of East Central Mississippi. Paper Presented at the 30th Annual Meeting of the Southeastern Archaeological Conference, Memphis.
 - The Aberdeen-West Point, Mississippi and Aberdeen substation survey. Department of Sociology and Anthropology, Mississippi State University. Submitted to Tennessee Valley Authority, Norris Contract No. TV-35374-A. Copies available from Department of Sociology and Anthropology Mississippi State University, Mississippi State. TVA, Norris.
 - Lyon's Bluff Site (220K1) Radiocarbon Dated. <u>Journal of Alabama Archaeology</u> 23:53-58.
 - The Protohistoric Component at the Lyon's Bluff Site Complex, Oktibbeha County, Mississippi. Paper presented at the 4th Annual Meeting of the Mid-South Archaeological Conference, Memphis (this volume).

Muller, Jon

The Kincaid System: Mississippian Settlement in the Environs of a large site. In Bruce D. Smith (editor), Mississippian Settlement Patterns, pp. 269-292. Academic Press, New York.

Peebles, Christopher S.

Determinants of Settlement Size and Location in the Moundville Phase. In Bruce D. Smith (editor),

Mississippian Settlement Patterns, pp. 369-416. Academic Press, New York.

Price, James E.

The Settlement Pattern of the Powers Phase. In Bruce D. Smith (editor), <u>Mississippian Settlement Patterns</u>, pp. 201-232. Academic Press, New York.

Rafferty, Janet E.

Surface Collections and Settlement Patterns in the Central Tombigbee Valley. Southeastern Archaeological Conference Bulletin 22:90-94.

Ranjel, Roderigo

Narrative. In Edward G. Bourne (trans.) Narratives of the Career of Hernando De Soto, pp. 43-150. Allerton, New York.

Segelquist, C.A., and W.E. Green

Deer Food Yields in Four Ozark Forest Types. <u>Journal of</u> Wildlife Management 32:330-337.

Sheldon, Craig T., Jr., and Ned J. Jenkins

Protohistoric Development in Central Alabama. Paper presented at the 4th Annual Meeting of the Mid-South Archaeological Conference, Memphis.

Smith, Bruce D.

Middle Mississippian Exploitation of Animal Populations.
University of Michigan Museum of Anthropology
Anthropological Papers No. 57.

Variation in Mississippi Settlement Patterns. In Bruce D. Smith (editor), Mississippian Settlement Patterns, pp. 479-503. Academic Press, New York.

Solis, Carlos, and Richard Walling

Archaeological Investigations at the Yarbrough Site (22C1814) Clay County, Mississippi. University of Alabama Office of Archaeological Research Report of Investigations No. 30.

Sparks, J.T.

Prehistoric Settlement Patterns in Clay County, Mississippi.
Unpublished Master's Thesis, Department of Sociology and
Anthropology, University of Mississippi, University.

Stephenson, L.W., and W.H. Monroe

The Upper Cretaceous Deposits. Mississippi State Geological Survey Bulletin No. 40.

Stubbs, John D., Jr.

1982 A Preliminary Classification of Chickasaw Pottery. Mississippi Archaeology 17:50-56.

Archaeological Survey in Lee County, Mississippi. Paper presented at the 4th Annual Meeting of the Mid-South Archaeological Conference, Memphis.

United States Department of Agriculture

Mississippi Forest. U.S. Forest Service Southern Forest
Experiment Station Forest Survey Release No. 81.

Ward, Trawick 1965

Correlation of Mississippian Sites and Soil Types.

<u>Southeastern Archaeological Conference Bulletin</u> 3:42-48.

CHAPTER 6

THE PROTOHISTORIC COMPONENT AT THE LYON'S BLUFF SITE COMPLEX OKTIBBEHA COUNTY, MISSISSIPPI

Richard A. Marshall

Recent aerial photographs of the Lyon's Bluff site locale not only reveal the primary Mississippian period complex as being fortified as earlier believed, but also clearly shows the later westerly placed complex as being a planned village as well. This new data now requires reassessment of earlier interpretations regarding social deterioration and settlement dispersal of the Mississippian occupation of the Black Prairie physiographic area of east central Mississippi. This especially is true of the late fifteenth and sixteenth centuries.

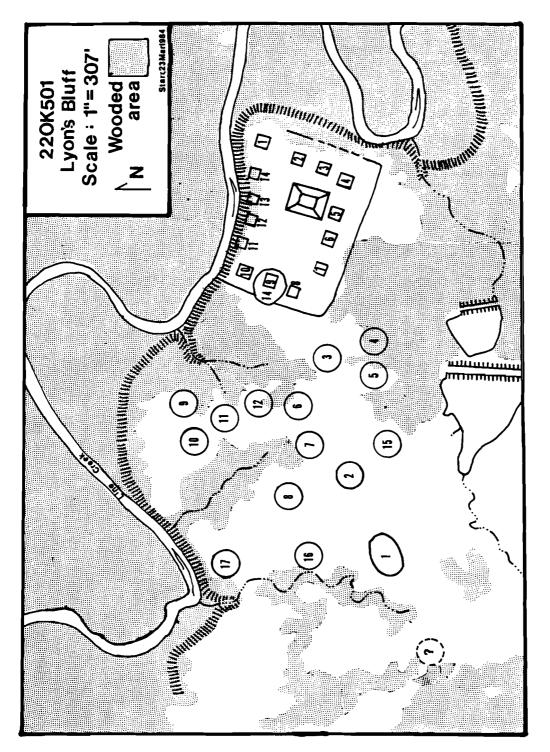
The Lyon's Bluff site complex is located in the northeastern corner of Oktibbeha County, overlooking Line Creek. Line Creek is named after the arbitrary line set by the French in 1702 dividing the territories of the Choctaw and Chickasaw, seemingly unmindful of the fact that the little known Chakchiuma tribe claimed the area, unless even at that time they were a non-entity as they later were.

The site consists of two major areas, each associated with equally distinct complexes (Figure 6.1). The older, major, and more distinct area is known as the Lyon's Bluff site (22-0k-1). This area is a rectangular village area, its long axis running east paralleling and overlooking Line Creek from an abrupt bluff height of 3 m to 5.5 m. A small temple mound approximately 3 m high is centrally placed at the end of the ridge overlooking a lower portion of the site on the east. The eastern end of the site has been artifically leveled by deliberate trash dumping and presents the appearance of a steep banked second terrace overlooking Line Creek where it has doubled back to touch the southeastern corner of the site. A large, open plaza area is located on the ridge west of the mound. This area has also been artifically leveled by deliberate placement of trash on both sides of the ridge. Around the mound and the plaza are grouped a minimum of 10 distinct house mounds. Four more are indicated in the area immediately overlooking the creek.

It has long been thought that the site should be fortified. The abrupt discontinuity in the surface distribution of cultural materials suggested the presence at one time of a physical barrier. A high altitude, December 1972, aerial photograph of the site locale clearly shows the site outline. Figure 6.1 is a tracing of an enlargement of the photograph.

Excavations at the site in the late 1960s and early 1970s indicate an initial occupation sequence of four phases (Marshall 1973): Tibbee Creek phase, Lyon's Bluff phase, Sorrels phase, and Mhoon phase.

Richard A. Marshall, Cobb Institute of Archaeology, P.O. Box AR, Mississippi State University, Mississippi State, MS 39762



Map drawn from enlargement Figure 6.1 Lyon's Bluff site (22-0k-1), Uktibbeha County, Mississippi. of aerial photograph of site environs, dated December 1972.

The Tibbee Creek phase is the initial occupation, by people with a cultural background similar to the O'Byam/Cairo Lowland regions and possibly the Moundville I phase. The Lyon's Bluff phase is a complex clearly related to Moundville II phase. The Sorrels phase is a complex very similar to Moundville III and shows strong traits of the later Alabama River complex of central Alabama. The Sorrels phase has been suggested as possibly representing two complexes, the Moundville IIIlike indigeneous material, plus a strong infusion of ceramics and projectile points belonging to some of the Late Mississippian complexes of the Upper Yazoo Basin/eastern Arkansas/western Tennessee regions. Presently we are still unable to clearly distinguish two separate temporal complexes during the Sorrels phase time unit. There is, however, a meeting point at the Lyon's Bluff site between more eastern complexes (from Alabama) and Mississippi Valley complexes (largely eastern Arkansas and extreme western Tennessee) during that time. The Mhoon phase, as described at Lyon's Bluff, is represented largely by the western complex at the site, is still later, and is apparently a western extension of a complex related to the Alabama River complex, a more Choctaw-like tradition than a Chickasaw tradition. The Mhoon phase is also very much related to the Protohistoric Plantation Homes and Rolling Hills settlement complex located at Starkville (Atkinson 1975, 1979; Marshall 1971). This complex is presently thought to be the Historic Chakchiuma settlement identified on the DeMargeny map of 1749 (New Orleans, a copy on file, Mississippi Department of Archives and History). The material at Plantation Homes/Rolling Hills is not the same as material from the Leflore site (22-Gr-539) also thought by some to be Chakchiuma.

The Western complex area of the Lyon's Bluff site contains a minimum of 15 house mounds of the type described by Nash (1968) as being a Mississippian characteristic in the central southeastern United States. Each of the house mounds is approximately 23 m to 36 m in diameter; some are elevated to a height of 0.6 m to 0.8 m. The plowdisturbed surface is littered with pottery, animal bones, and fresh water mussel shell, and by much fired earth and daub. The pottery is largely the same as that described by Atkinson (1979) from the Rolling Hills site areas at Starkville. Stone projectile points are rare and chipped lithics not common, but stone mullers, hammer stones, anvil stones, and abrading stones are on par for most Mississippian sites. These house sites are located along the east/west ridge, the same as for the Lyon's Bluff complex, with three of the most prominent mounds (1, 2, and 3) equally spaced on the crest. Three lesser mounds (4, 5, and 15), just south of the crest, are only slightly elevated. The remaining house mounds of this complex are north of the ridge crest. On the west, adjacent to a small drainage flowing north and aligned with Mound 1, are two mounds (16 and 17). One (17) overlooks Line Creek. On the east, similarly adjacent to a short but deeply cut drainage, also flowing north, are 5 house mounds (6, 9, 10, 11, and 12). The small drainage on the east physically separates the western complex from the Lyon's Bluff site proper. Within the rectangular enclosure of house mounds are two more mounds (7 and 8). With two of the eastern mounds (6 and 12), these are clustered around the head of a slight drainage cutting across the large, broad, central "plaza-like" area of nearly 100 m² in which there is not the slightest evidence of cultural material. The plaza is open to and overlooks Line Creek.

On the Lyon's Bluff site there is one house mound (14) which has a heavy scatter of pottery possibly associated with or related to that of the Western complex. It is this house from which the latest radiocarbon date of 1556 came, clearly indicating that the round house feature there belongs to the Sorrels phase. Solis and Walling (1982) have described material very similar to that of the Sorrels phase from the Yarbrough site (22-CL-814) on Tibbee Creek, 20 km east of Lyon's Bluff. Line Creek is an important part of this drainage. Yarbrough is identified as a Sorrels phase site and dates mid-fifteenth century. In the Yarbrough site there is also some material similar to that of the Mhoon phase, suggesting a strong sequential connection between the Sorrels and Mhoon phases as at Lyon's Bluff. The Tibbee Creek site (22-Lo-600) (O'Hear et al. 1981) at the mouth of Tibbee Creek approximately 6 km east of Yarbrough, though largely Lyon's Bluff phase (Moundville II), also has a Sorrels-like phase on it. The Kellogg Village site (22-C1-527) on the Tombigbee River 1.5 km due north of the Tibbee Creek site had a strong Moundville I (Tibbee Creek phase) occupation (Atkinson et al. 1980). The Mhoon phase houses of the Western complex also have some Sorrels phase-like materials on them. This forms the basis for the interpretation that the Sorrels phase is followed by the Mhoon phase,

Dating the Mhoon phase is somewhat difficult. It is later in time than most of the Lyon's Bluff site proper. We may place the Mhoon phase as later than 1556. Mhoon phase material is highly similar to the Rolling Hills subdivision on the northern edge of Starkville. The Rolling Hills complex comes into the early historic period. There are a few blue glass beads, a forged metal chisel remarkably similar to those now recognized from sites in eastern Alabama and believed to date from the mid-sixteenth century (i.e., De Soto time), an axe or hoe blade, a brass bell, an iron knife blade, and a few iron and brass tinklers. There is also a trophy skull with a red painted circle with a central cross outlined in black (a standard Southeastern Ceremonial Complex motif), and a typical Nodena Red and White swastika swirl water bottle. This bottle is like those believed to be from the Quapaw settlements near the mouth of Arkansas River. The bottle probably dates from the mid-seventeenth century. Burials at the site are rarely primary interments; most burials are groups of bundle burials. Several secondary burials have been accompanied with, or are in, large ceramic vessels similar to those common to the Alabama River phase. The trophy skull did come from a primary burial. Rolling Hills is believed to date largely from the mid-seventeenth and early eighteenth centuries and appears to be the Chakchiuma settlement shown on the DeMargeny map. The associated historic artifacts also suggest a date later than the De Soto era.

In 1973 I read a paper at the Southeastern Archaeological Conference meeting on the Mississippian occupation of east central Mississippi. In that paper it was noted that surveys up to that time in the central Black Prairie province, including the adjacent Tombigbee flood plain, seemed to indicate a populous Mississippian occupation. This occupation was recognized as structured in four ways, three of them sequentially: 1) compact organized town-like villages, 2) transitional villages with little organization, and 3) dispersed, hilltop settlements. Collecting stations (4), more probably farmsteads, were noted on earlier prehistoric occupations in river bottom locations. A

time lag between the two major kinds of Mississippian sites was noted, with the more traditional compact villages appearing to be earlier, largely contemporary with the Lyon's Bluff site's Tibbee Creek and Lyon's Bluff phases, while the later dispersed settlements had associated ceramics of the Sorrels to Mhoon phases, and some even lasted into early historic times, the late eighteenth and early nineteenth centuries. Choctaw pottery types were present. These types also, but rarely, occur at Rolling Hills at Starkville. Transitional-like villages were found to have pottery like that of the Lyon's Bluff to Sorrels phases. Isolated river bottom sites largely had pottery of all the Lyon's Bluff site phases, but most often that of the Tibbee Creek and Lyon's Bluff phases, followed by some Sorrels plain pottery.

Rather than concluding that a change in the physical environment caused a gradual Mississippian cultural change on the Black Prairie from one village structure to the other, it was suggested that there may have been a change in the social environment. That is, a change from an attitude favoring living in close proximity and the need for fortification or compact units for defense; to a preference for large, broad, open (dispersed) undefended villages several miles across. The Chickasaw, however, had small palisaded fortifications placed strategically within such settlements. No attempt, however, was made to speculate publicly about what that social change might have been. It was silently thought, however, that this may have been a result of the stress of supporting a rigidly, ritually structured hierarchy of parasitic elite that lived in ceremonial centers, while the rest of the population eked out a living by hunting, gathering, and intensive agriculture out of small towns and farmsteads strung along major streams (there is a minimum of four satellite villages to Lyon's Bluff).

The interpretation of a well-planned or organized Lyon's Bluff Western complex now alters the former concept of a direct evolution from compact villages to dispersed settlements. This is not the only planned village falling into the post-Moundville subperiod in the Black Prairie province of east central Mississippi and adjacent Alabama. Peebles' (personal communication 1982) excavation at Lubbub Creek, near Aliceville, Alabama, 70 km southeast of Lyon's Bluff, shows a Mississippian settlement contemporary to Sorrels with an organized village much like that of the Western complex at Lyon's Bluff. The ceramics from the contemporary Lubbub Creek complex have been compared favorably with that of the Sorrels phase at Lyon's Bluff. DeSoto's winter village was a ('liberated') fortified town, assumed to have been in the Black Prairie province of east central Mississippi. This does not invalidate the concept of a direct evolution from compact villages to dispersed settlements; it merely alters it, to include the later continuation of some organized villages, and counters the concept of a complete social breakdown after the De Soto entrada.

At present, I would rather see this evolution as a result of extraregional changes. What we are seeing is an attempt to stem or alter the influence of those changes on the immediate area. The "Empty Quarter" hypothesis (presented at the 1982 Southeastern Archaeological Conference, Memphis) in the Middle to Late Mississippian period is perhaps being regionally exemplified. The Empty Quarter Hypothesis holds that the Central Mississippi Valley Mississippian complexes appear to have "collapsed" somewhere around the mid-fourteenth to early

fifteenth centuries. Though the southeastern regions to the east of that area were less influenced by that collapse, Moundville apparently did succumb to it in the late fifteenth century. This left something of a social or political vacuum, and perhaps a slightly reduced population. While the remnants of the once great Moundville sphere reorganized, others in the Mississippi Valley (eastern Arkansas) had already done so, their areas having experienced the hypothetical trauma earlier, reaching out and making contacts more distant than their immediate predecessors.

Locally, the collapse is seen at the close of the Lyon's Bluff phase. The Sorrels phase then emerges. Holding to its past connection with the Moundville sphere, it also received the spreading influence from the Central Mississippi Valley. This accounts for the stronger western traits occuring at Lyon's Bluff than in some of the other Tombigbee sites to the south and east. After the development of the Alabama River phase, the closer proximity and long traditional ties with its source sees a reemergence of former Moundville sphere, now Alabama, traits in the Late Sorrels phase and in the Mhoon phase.

In such a model as this, where there is no actual historical data, all looks smooth and logical. But here we must consider the actual fact of the De Soto entrada in 1540/41, and the possibility that the expedition wintered in the east central Mississippi locale, possibly adjacent to the Lyon's Bluff/Rolling Hills area. That entrada came during the time of the Sorrels phase, but is not the cause of the phase traits. The western, Central Mississippi Valley contacts were already present in the phase. The De Soto entrada into the Central Mississippi Valley proper and its concomitant effects (both in the Tombigbee and Mississippi valleys) may have stimulated the Alabama River phase-like traits to move strongly west into the Late Sorrels phase, resulting in or giving rise to the Mhoon phase. It also acted as a stimulus for continued strong contacts with the Mississippi Valley. When the British/French trade goods begin to infiltrate the region in the late seventeenth century the Lyon's Bluff Western complex evolves into the Rolling Hills complex or phase at Starkville.

REFERENCES CITED

Atkinson, James R.

- 1976 A Late Mississippian/Early Historic Site in the Tombigbee River Drainage of Northeast Mississippi. Paper presented at the 17th Annual Meeting of the Conference on Historic Site Archaeology, Tuscaloosa.
- 1979 A Historic Contact Indian Settlement in Oktibbeha County, Mississippi. <u>Journal of Alabama Archaeology</u> 25:61-82.
- Atkinson, James R., John C. Phillip, and Richard Walling
 1980 The Kellogg Village Site Investigations, Clay County,
 Mississippi. Department of Anthropology, Mississippi State
 University. Submitted to the U.S. Army Corps of Engineers,
 Mobile, Contract No. DACW01-77-C-0015.

- Marshall, Richard A.
 - 1971 Investigations of a Culturally and Ecologically Marginal Archaeological Site. Ms. on file, Department of Anthropology, Mississippi State University, Mississippi State.
 - 1973 Comment on the Mississippian Occupation of East Central Mississippi. Paper presented at the 30th Annual Meeting of the Southeastern Archaeological Conference, Memphis.
 - 1979 Lyon's Bluff Site (220K1) Radiocarbon Dated. <u>Journal of</u> Alabama Archaeology 23:53-57.
- Nash, Charles H.
 - Residence Mounds: An Intermediate Middle-Mississippian

 Settlement Pattern. Memphis State University Anthropological Research Center Occasional Papers No. 2.
- O'Hear, John W., Clark Larsen, Margaret M. Scarry, John Phillips, and Erica Simons
 - 1981 Archaeological Salvage Excavations at the Tibbee Creek Site (22L0600), Lowndes County, Mississippi. Department of Anthropology, Mississippi State University. Submitted to the U.S. Army Corps of Engineers, Mobile, Contract No. DACW01-77-C-0015. Copies available from Department of Anthropology, Mississippi State University, Mississippi State.
- Solis, Carlos, and Richard Walling
 1982 Archaeological Investigations at the Yarborough Site (22C1814)
 Clay County, Mississippi. University of Alabama Office of
 Archaeological Research Report of Investigations No. 30.

CHAPTER 7

PROTOHISTORIC HUNTING SITES IN NORTHEASTERN ARKANSAS

Dan F. Morse

Permanent occupation of much of northeastern Arkansas and southeastern Missouri essentially ceased by the Protohistoric, due to Mississippian populations emphasizing the farming of large areas of sandy loams near the Mississippi River and along the White and Lower St. Francis Rivers. The abandoned region continued to be traversed for various reasons, including the procurement of cherts, copper, mineral paints, basalt, sait, and animals such as the white-tailed deer. Hunting sites can be identified by the presence of Nodena points and end scrapers. Examination of these data and the use of early documents allows us to develop a general picture of Protohistoric hunting behavior.

It is very difficult to investigate the hunting activity of a large population living in dispersed farmsteads throughout a region such as the Central Mississippi Valley. Mississippian sites are prevalent in a number of environmental settings ranging from the Meander Belt along the Mississippi River through the Braided Stream terrain of the Western Lowlands and well into the Ozark Uplands. For example, the Gypsy Joint site is an excellent example of a Middle period Mississippian farmstead which provided evidence of hunting and gathering as well as farming. The hunting component is well interlarded with the entire cultural expression.

By the beginning of the fifteenth century, there was a significant population shift within the Central Mississippi Valley (Morse and Morse 1983; Williams 1983). The Braided Stream area was abandoned for the purposes of constructing and living in farmsteads, villages or ceremonial centers. Permanent population primarily was restricted to the Meander Belt region of the Mississippi River. Similar expanses of alluvium along portions of the White River and along the Arkansas River also were occupied. All but a small portion of the Western Lowlands and about one-third to one-half of the Eastern Lowlands were mostly abandoned to permanent occupation. Almost all of southeastern Missouri and most of northeastern Arkansas was unoccupied by about A.D. 1400. Archaeological evidence of such a shift in population always is suspect because of the vagaries of survey data and the possibility that populations can become invisible archaeologically by settlement dispersal in contrast to concentration in large villages. The survey data are excellent for portions of this vacated area. Schiffer and House (House 1975) were unable to locate any late sites in the Cache River survey. But in addition to the archaeological evidence, there are eyewitness reports of the situation in the succeeding sixteenth century. In July of 1541, what is now thought to be the northwestern portion of northeastern Arkansas was "a wilderness" (Biedma, in Bourne 1904:29-30), and what appears to be most of the Eastern Lowlands of

Dan F. Morse, Arkansas Archeological Survey, Arkansas State University, Drawer 820, State University, AR 72467

southeastern Missouri "was sterile and poorly populated" (Garcilaso de la Vega, in Varner and Varner 1951:450). While there are differing interpretations of precisely where the De Soto expedition visited, the area of exploration in northeastern Arkansas and southeastern Missouri is generally well accepted.

The reasons for this population shift appear to be a response to an increased importance of warfare, and hence defense (House 1975). Defense involved enlargement of fortified villages and a population nucleation which restricted these villages to those locations where significant expanses of easily farmed sandy loams existed—the Meander Belt region. Occupation at some sites caused the accumulation of three meters of cultural deposits. Dispersed populations evidently could not be defended and those areas—the Braided Streams—where a dispersed farming population was necessary because soils were dispersed, were abandoned to permanent occupation.

Whatever the reasons (Williams 1983:78 suggests drought), this fifteenth century population change created large expanses of territory where single components of cultural behavior can be observed archaeologically. To the north, particularly within the Cairo Lowland and Ste. Francois Mountains, the procurement of basalt, cherts, copper, mineral paints, and salt can be investigated to a greater extent than in earlier periods. Within the Braided Stream regions, the hunting of white-tailed deer would appear to be a very fruitful investigation.

The white-tailed deer was a very important animal to the populations of the eastern United States throughout the time of human history. In the early eighteenth century,

"the deer is very frequent in this province, notwithstanding the great numbers of them that are killed by the natives . . . The natives dress the skin extremely well, like buff, and afterwards paint it. These skins that are brought to France are often called does skins" (Du Pratz 1972:242).

In the late eighteenth century, the deerskin trade was still very important to the French and Indians (Smith 1974:8).

Observations concerning the Quapaw emphasize the hunting of bison rather than deer. The French were used to the European stag, and the white-tailed deer did not seem to command much attention as an animal to hunt. In contrast, DePratz says wistfully, "I longed much to kill a buffalo with my own hand" (1972:122).

There needs to be some examination of the records of Arkansas Post to quantify the number of deerskins being exported, but even without these data, it is evident that the hunting of deer for meat and for skins was important to the Indians.

Du Pratz did observe (1972:242) that "the natives hunt the deer sometimes in companies, and sometimes alone." There are undoubtedly many pertinent French accounts which I trust I will be informed about in the immediate future relevant to hunting practices. Because our libraries are very limited in source material, I hope that this future intelligence includes xerox copies of the pertinent accounts. One of the problems with French sources is that the Indians have gone through a cultural change and drastic population decrease. This is most evident in the striking contrast between French accounts of the Quapaw and the

archaeological evidence of certain aspects of material culture such as house size and number of sites. Some French even ignored the presence of other French when writing about the Quapaw (Dickinson 1982:152), so it takes solid historical knowledge to use the French accounts.

But it is really the Protohistoric period which commands our attention here. Our only Protohistoric documents are those of the De Soto expedition. There is no reason here to belabor the problems with these sources; this has been done elsewhere (Brain et al. 1974; Phillips et al. 1951). My primary purpose here is to indicate how an early document used together with archaeological evidence can shed light on Protohistoric hunting behavior. The document taken alone makes little sense and the archaeological data taken alone can only be interpreted in a very restricted way.

By the Protohistoric period, two artifacts prevalent in northeastern Arkansas and southeastern Missouri were the Nodena point and the end scraper. Triangular points were gaining in popularity. It is difficult if not impossible to identify an isolated find as a Protohistoric end scraper rather than a Dalton example dating almost 10,000 years earlier. Triangular points become more common through time and are prevalent in the Protohistoric period, but as a style date back to around A.D. 700 to A.D. 800, particularly in the Cairo Lowland. Isolated finds of triangular points do not necessarily mean the presence of a Protohistoric component at a site. Nodena points, however, are very distinctive and only date after A.D. 1400. Many of the earliest recorded ones have truncated bases (Perino 1966:33-35). A Nodena point automatically signals the presence of a Late period Mississippian and/or a Protohistoric component. The added presence of end scrapers with Nodena points, with or without triangular points, strengthens an interpretation of hunting and butchering after A.D. 1400. Most such sites would probably date after A.D. 1500 and within the Protohistoric period. Other hunting artifacts expected at these sites would be utilized flakes and other unifacial tools. A possible biface tool used after A.D. 1400 is bi-pointed or leaf-shaped, fairly large, and sometimes beveled from resharpening. Fragments and flakes of bifacial retouch from such tools should exist at hunting sites. It is possible to identify such fragments because many of the broken specimens collected at late village sites are made of rather exotic cherts and quartzites.

Nodena points rarely occur at many sites within the vacated area. There has been no attempt to quantify this observation, which is based both upon collections curated by the Arkansas Archeological Survey and upon private collections, for such a quantification would be very time-consuming, particularly during these times of economic difficulties. Some sites have produced several Nodena points, indicating the possibility of either locations reoccupied over time or the presence of hunting/skin preparation base settlements in contrast to hunting camps. Our impression is that end scrapers occur at these sites in conjunction with the Nodena points, but one site, Old Town Ridge (3-Cg-41), is very poor in end scrapers but rich in terms of Nodena points, according to our collections. Another site, Gibson (3-Lw-509), based on informant data is rich in Nodena points and in end scrapers. It was described by Moore (1910:359-360) as a very large mound site adjacent to the Black River.

Both sites, Gibson and Old Town Ridge, are late Middle period Mississippian sites. Both have been favorite digging locations for treasure seekers; in particular, numerous Gibson site ceramics are in

private collections (Hathcock 1976). Both probably date within the fourteenth century as villages. While Old Town Ridge was a village, Gibson evidently was a ceremonial center similar to the more northern Powers Fort (Price and Griffin 1979). Both Arkansas sites were abandoned by their occupants by around A.D. 1400 and reoccupied during the next two or three centuries by hunting populations. It is possible that end scrapers signal a later occupation (Williams 1980) and that the Old Town Ridge Nodena point component predates the Protohistoric period, while the Gibson site Nodena point/end scraper component dates during the Protohistoric period. It is also possible that Old Town Ridge was not occupied enough times for end scrapers to enter the archaeological record in significant numbers.

If the Gibson site was a former ceremonial center, it most probably would have been revered long after its abandonment. Reoccupation by later hunters might also have been made easier by the fact that such a site would have remained relatively clear for a while after abandonment. Certainly as time went on, the formerly cleared fields surrounding the site as it reverted to woodland would have created an ideal setting for the white-tailed deer. But this is about as far as we can interpret the archaeological data, at least until a concentrated effort is made to better quantify these data.

A brief description by the De Soto expedition may provide valuable insight for these archaeological observations:

. . . [From Pacaha] one [expedition was] undertaken to the northwest, where we were told there were large settlements, through which we might go. We went in that direction eight days, through a wilderness which had large pondy swamps, where we did not find even trees, and only some wide plains, on which grew a plant so rank and high, that even on horseback we could not break our way through. Finally, we came to some collections of huts, covered with rush sewed together. When the owner of one moves away, he will roll up the entire covering, and carry it, the wife taking the frame of poles over which it is stretched; these they take down and put up so readily, that though they should move anew every hour, they conveniently enough carry their house on their backs. We learned from this people that there were some hamiets of the sort about the country, the inhabitants of which employed themselves in finding places for their dwellings wherever many deer were accustomed to range, and a swamp where were many fish; and that when they had frightened the game and the fish from one place, so that they took them there not so easily as at first, they would all move off with their dwellings for some other part, where the animais were not yet shy. This Province, cailed Calcuc, had a people who care little to plant, finding support in meat and fish (Biedma, in Bourne, 1904:29-30).

The De Soto expedition entered the Central Mississippi Valley in early May of 1541. Their mention that men were working in the fields indicates that the fields were being cleared in preparation for the planting of late corn, since planting of these fields was usually communal in the Southeast (Hudson 1976:295). The Biedma description quoted above seems to describe a communal summer hunt during July of 1541 on the other side of the Valley. This evidently was not characteristic of the Southeast, but the events of the fourteenth and fifteenth centuries in the Central Mississippi Valley may have resulted in behavior not characteristic to the east. The nearest town sites would have been some 50 km to 65 km to the south if the Gibson site is near the location of

this early observation. If this was not a summer hunt away from the town sites, then we have to accept that nomadic hunters and gatherers were foraging near a sophisticated intensive agricultural society. I prefer to work with the premise that these people described by Biedma were intensive agriculturalists on a communal summer hunt.

REFERENCES CITED

Bourne, Edward G., editor

Fayetteville.

- 1904 Narratives of the Career of Hernando De Soto. A.S. Barnes, New York.
- Brain, Jeffrey, Alan Toth, and Antonio Rodriguez-Buckingham
 1974 Ethnohistoric Archaeology and the De Soto Entrada into the Lower
 Mississippi Valley. Conference on Historic Site Archaeology
 Papers 7:232-289.
- Dickinson, Samuel, editor and translator

 1982 New Travels in North America by Jean-Bernard Bossu 1770-1771.

 Northwestern University Press, Natchitoches, Louisiana.
- Du Pratz, Antoine Simon Le Page 1972 The History of Louisiana. Reprinted. Claitor's Publishing Division, Baton Rouge. Orginally published in 1758, Paris.
- Hatchock, Roy
 1976 Ancient Indian Pottery of the Mississippi River Valley. Hurley
 Press, Camden, Arkansas.
- House, John H.

 1975 Summary of Archeological Knowledge Updated with Newly Gathered
 Survey Data. In Michael B. Schiffer and John H. House
 (assemblers), The Cache River Archeological Project, pp.
 153-162. Research Series 8, Arkansas Archeological Survey,
- Hudson, Charles
 1976 The Southeastern Indians. University of Tennessee Press,
 Knoxville.
- Moore, Clarence B.
 1910 Antiquities of the St. Francis, White and Black Rivers, Arkansas.

 Journal of the Academy of Natural Sciences of Philadelphia
 14:359-360.
- Morse, Dan F., and Phyllis A. Morse
 1983 Archaeology of the Central Mississippi Valley. Academic Press,
 New York.
- Perino, Gregory
 1966 The Banks Village Site, Crittenden County, Arkansas. Missouri
 Archaeological Society Memoir 4:33-35.

- Phillips, Philip, James Ford, and James B. Griffin
 1951 Archaeological Survey in the Lower Mississippi Alluvial Valley,
 1940-1947. Peabody Museum of Archaeology and Ethnology Papers
 No. 25.
- Price, James E., and James B. Griffin
 1979 The Snodgrass Site of the Powers Phase of Southeast Missouri.
 University of Michigan Museum of Anthropology Anthropological
 Papers No. 65.
- Smith, Samuel D.

 1974 A Survey and Assessment of the Archeological Resources of Cadron

 Settlement, Arkansas. Arkansas Archeological Survey Research

 Report No. 1.
- Varner, John, and Jeannette Varner, translators 1951 The Florida of the Inca. University of Texas Press, Austin.
- Williams, Stephen
 1980 Armorel: A Very Late Phase in the Lower Mississippi Valley.
 Southeastern Archaeological Conference Bulletin 22:105-109.
 - Some Ruminations on the Current Strategy of Archaeology in the Southeast. Southeastern Archaeological Conference Bulletin 21:72-81.

CHAPTER 8

PROTOHISTORIC DEVELOPMENT IN CENTRAL ALABAMA

Craig T. Sheldon, Jr. and Ned J. Jenkins

Recent investigations have confirmed the presence of various Central Mississippi Valley traits in the Late Mississippian and Early Protohistoric periods of central Alabama. They include ceramics with applique, punctate, and painted decoration and small shell plaques. The spatial and temporal distribution of these traits and their possible roles in Protohisotoric development are discussed, followed by a brief examination of the potential explanations for their appearance.

The Protohistoric period in central Alabama spans the time between the Spanish Entrada of 1540 and the establishment of effective French colonization in 1700. One of the dominant manifestations of the period--The Alabama River phase--has been previously characteristized by Cottier (1970), Sheldon (1974), and Curren (1982) as a simplified or truncated continuation of basic Mississippian culture. There was considerable continuity in basic technological adaptations (e.g. subsistence, manufacturing techniques, etc.), but drastic change in the disappearance of mound building, large settlements, specialized artifact forms of exotic materials, most of the Southeastern Ceremonial Complex, elaborate mortuary associations, and other indicators of social and religious complexity. Most of the earlier studies traced the development of the Alabama River phase from Moundville, but recent analyses have indicated that a number of ceramic traits traceable to the Central Mississippi Valley entered eastern Mississippi and central Alabama and contributed significantly to the evolution of Protohistoric ceramics. It is these intrusive elements and their implications that are the subject of this paper.

Until recently, the lack of in-depth ceramic analyses and of geographical coverage prevented the determination of any more than a very general derivational relationship between the Mature Mississippian occupation at Moundville and the subsequent Protohistoric Alabama River phase. Then in 1980, Steponaitis presented his detailed analysis of the Moundville ceramics. Additional work by Bozeman (1981), Curren (1982), and Curren and Little (1981) in the Warrior River drainage; by Jenkins (1982), Marshall (1977), Peebles (1983), and Solis and Walling (1982) in the Tombigbee River drainage; by Stowe et al. (1982), in the Mobile Delta and Jenkins and Paglione (1980) and Sheldon (n.d.) in the Alabama River drainage have added significantly to an increased understanding of the temporal and geographical relationships of the Moundville and Alabama River phases. Of particular importance are the Sorrels phase at the Lyons Bluff and Yarborough sites on Tibbee Creek in eastern Mississippi and the Summerville sequence at the Lubbub sites on the Central Tombigbee in Alabama.

Craig T. Sheldon, Jr., Department of Sociology, Auburn University at Montgomery, Montgomery, Al 36193.

Ned J. Jenkins, Fort Toulouse - Jackson Park, Route 6, Box 6, Wetumpka, AL 36902.

On the basis of gravelot seriation and some stratigraphic data, Steponaitis has divided the Moundville sequence into three phases (Figure 8.1). These are Moundville I of A.D. 1050 to A.D. 1250, Moundville II of A.D. 1250 to approximately A.D. 1400 and Moundville III of approximately A.D. 1400 to 1550. The boundaries between the phases are largely arbitrary divisions of an "...uninterrupted local development...(with) a great deal of stylistic continuity..." in ceramics (1980:221-222). Unfortunately, dates for the termination of Moundville III are not secure, and considerable controversy presently surrounds the placement of the crucial 1540 date of the De Soto expedition with respect to the Moundville-Alabama River transition (Figure 8.2).

Back tracking from the Protohistoric period into the Moundville III phase, it is possible to trace the formal and stylistic origins and subsequent development of the majority of the ceramic attributes of the Alabama River phase. Carthage Incised, (vars. Carthage, Foster and Poole), one of the dominant Moundville III types, continues into Early Alabama River and eventually evolves into Alabama River Incised, (var. unspecified). It should be noted that the present definition of Alabama River Incised is drastically reduced from the original descriptions of Cottier (1970) and Sheldon (1974) and is now restricted to fine line incised flaring rim bowls, carinated bowls, and possibly some standard jars. Much of the formerly included material is now more correctly subsumed under varieties of Carthage Incised and Barton Incised. The evolutionary continuity of Carthage Incised into Alabama River Incised is clear and unmistakeable, but since little Alabama River Incised is actually found at the site of Moundville it is obvious that this evolution occurred after the abandonment of Moundville, perhaps at adjacent sites in the Warrior River drainage.

Mississippi Plain, (var. Warrior) continues as a dominant type into the Alabama River phase while Bell Plain, (var. Hale) remains a minority type. There is a clear continuity in Alabama River phase vessel forms of deep and shallow flaring bowls, carinated bowls, simple bowls, and standard jars from preceding Moundville forms. Other ceramic attributes traceable to Moundville include surface burnishing, human and animal effigy and multiple (more than two) strap or lug handles on standard jars.

Many Moundville III ceramic traits did not continue into the Alabama River phase. These include Moundville Engraved, Moundville Incised, sub-globular jars, bottles, bowls of restricted, pedestal, cylindrical, and double forms, most of the representational motifs of the Southeastern Ceremonial Complex, and many of the elaborate effigy vessels. It is the absence of these forms (particularly Moundville Incised and Moundville Engraved) and the appearance of the applique wares which serve to operationally separate Alabama River from Moundville III.

Sometime during the Late Mississippian period (circa A.D. 1400-1500), several ceramic modes of nonlocal origin were grafted onto the local Moundville III, Summerville III, and Lyons Bluff assemblages. Recent excavations in the Tombigbee drainage clearly indicate that these traits were added to Summerville III or Lyons Bluff assemblages shortly after A.D. 1400. Just when these traits were added to the Moundville III assemblage, located approximately 65 km further east, is not clear.

Perhaps the most distinctive of the intrusive traits is an applique treatment between the lip and shoulder, variously referred to as

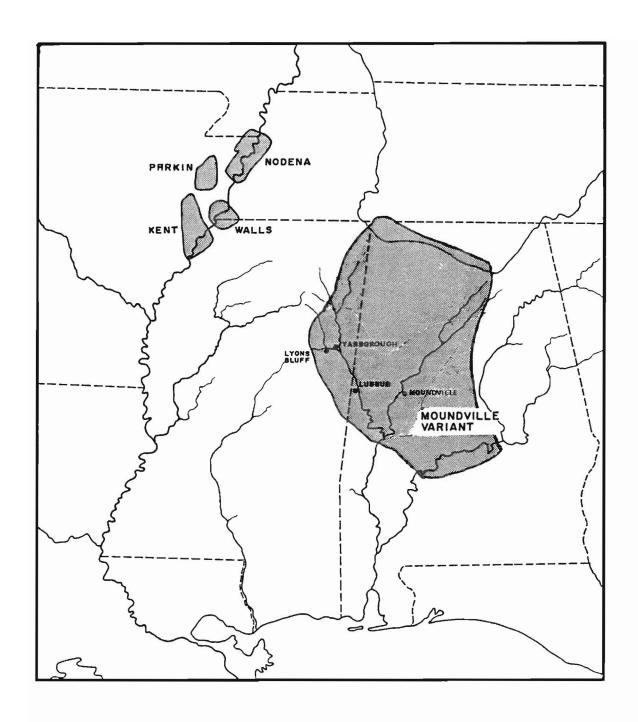


Figure 8.1. Protohistoric development in central alabama.

Stage	Historic		 	nississip- pian				,		Woodland
Period	Proto- historic				Middle Mississip- pian	; ; ; ; ;	Early Mississip-	pian		Late
Variant	Burial Urn	:	Moundville						/	Baytown Autauga
Upper Alabama Valley	Alabama River Phase	Thirty Acre Field Complex			٠.	Indefined	Moundville I	Early Roods- Like Complex		Autauga Phase
Cahaba Valley	Local Burial Urn Complex						Moundville I- Like Complex			Vest Jefferson Autauga
Warrior Valley	Local Burial Urn Complex	Moundville III Phase		Moundville II	Phase		Moundville I Phase			West Jefferson Phase
Central Tombigbee Valley	Summerville IV Phase	Summerville III Phase		Summerville	II khase		Summerville I Phase			Miller III Phase
Tibbee Creek	Sorrells Phase	Lyons Bluff	Phase	-	ı		Tibbee Creek Phase			Miller III Phase
		A.D. 1500	00%1		A.D. 1300	98	A.D. 1200			A. D. 1000

Figure 9.2. Mississippian Chronology and Nomenclature (after Jenkins 1982:123).

Campbell Applique or Alabama River Applique. Until recently, Alabama River Applique had been regarded as the hallmark of the Protohistoric Alabama River phase. Only recently have we come to realize that this type may date as early as A.D. 1400 or A.D. 1450 (Solis and Walling 1982:170).

Another distinctive mode grafted onto the Late Mississippian assemblages of central Alabama and eastern Mississippi was vertical incision from the lip, referred to as Barton Incised, var. Campbell and Barton Incised, var. Demopolis. Vertical incision from the lip consistently co-occurs with the applique treatment as rim modes from the Memphis region southeastwards into the Central Tombigbee and further eastward into the Alabama River Valley where it occurs only in post-1500 context. Vertical incision from the lip occurs at a lower frequency than the applique treatment in every complex.

Another decorative mode that is added to the Late Mississippian assemblages of western Alabama and eastern Mississippi is painting. This treatment has been referred to in the literature as Nodena Red and White or Alabama River Painted. Red and White painted pottery is an extreme minority in Late Moundville III and Early Alabama River contexts. Moundville III vessel shapes include collared and carinated bottles and simple bowls (Steponaitis 1983:337). By far the most common vessel shape during the Alabama River phase is the flaring rim bowl. The red painted pottery of the Alabama River phase is therefore most like Nodena Red and White, var. Ellison of the Upper Yazoo River area (Phillips 1970:134-144).

Still another decorative technique which appears during the late Mississippian period of central Alabama and eastern Mississippi is pinching. This material has been referred to as Parkin Punctated or perhaps as Alabama River Pinched. Outside the Memphis and Lower St. Francis Basin areas, this decorative treatment occurs with the highest frequency in east central Mississippi during the Sorrells phase, where it comprises approximately eight percent of the total ceramic assemblage, (Marshall, personal communication 1983). Eastward along the Tombigbee, Warrior, and Alabama rivers, pinching is an extreme minority.

Finally, another distinctive minority which occurs in central Alabama and eastern Mississippi is a type represented by a line of nodes encircling the vessel just above the shoulder (Mann 1981; Solis and Walling 1982). This material is very similar to what has been called Banks Noded in the Mississippi Valley (Perino 1966:70).

All of the aforementioned phases of central Alabama and eastern Mississippi (i.e. Lyons Bluff, Summerville III, and Moundville III) are members of what Jenkins (1982:119) has referred to as the Moundville Variant; that is, they are characterized by the types Moundville Incised, Carthage Incised, Mound Place Incised and Mississippi Plain. As previously stated, at around A.D. 1400-1500, several ceramic traits that did not develop locally were added to the assemblage. It is postulated that these traits had their origins in one or more of several very similar phases (i.e. Kent, Parkin, Walls, and Nodena) in the upper portion of the Lower Mississippi Valley.

The development of the applique rim mode has been best demonstrated at the Chucalissa site by Gerald Smith (1969). In this area, a handle sequence of loop to strap to triangular strap to arcaded to applique forms has been rather conclusively demonstrated (Smith 1969). No such evolutionary sequence of triangular strap to arcaded handles can be demonstrated in the central Alabama or eastern Mississippi area. In

fact, arcaded handles are rare in these areas and have been found only at two sites--Lubbub Creek and Lyons Bluff.

Documenting the development of vertical incising from the lip of standard jars is difficult, since it is such a minority in occurrence. However, Kent Incised or Barton Incised, var. Kent does occur in the lower levels at Chucalissa (Smith 1969: Fig. 4) lending some support for derivation from that area.

Perhaps the most obvious intrusive element into the eastern Mississippi/central Alabama areas is Parkin Punctated. This type has no Early or Middle Mississippian proto-types in these areas; whereas, at Chucalissa it clearly appeared as a major type as early as the Middle Mississippian period (Smith 1969: Fig. 4).

Also, Alabama River Red Painted is probably derived from Nodena Red and White. The widespread occurrence of that type in the upper portion of the Lower Mississippi Valley would lend some support for temporal priority in that area.

In conclusion, any attempt to produce explanations of the cultural processes which brought these intrusive elements into the eastern Mississippi and western Alabama areas would be premature. The available ceramic samples, stratigraphic data, and radiocarbon dates are insufficient to suggest anything beyond the relationships proposed here. There is the strong possibility of one or more site unit intrusions into the Tibbee Creek area of the Lyons Bluff and Yarborough sites around A.D. 1400-A.D. 1450 from the Memphis area or an adjoining region. An alternative would be the introduction of the traits through some form of diffusion or trade. Suffice it to say, by A.D. 1450-1500 all of the ceramic modes which appeared in the Protohistoric period were present in the Sorrells and Summerville III phases. Thus the Protohistoric Alabama River phase represents a clearly defined evolution (or perhaps better stated--a devolution) of the Moundville variant of Mississippian culture with no discernible evidence for any significant change in basic population composition. It is interesting to note that many of the early intrusive ceramic elements are most common in the western portion of the Moundville-dominated area and that many of the same modes are either rare or virtually nonexistent at the site of Moundville itself. This suggests that the site of Moundville was abandoned first and that much of the actual transition from the Late Mississippian to the Protohistoric may have occurred at other smaller adjacent sites in the Tombigbee and Warrior river drainages.

REFERENCES CITED

Bozeman, Tandy K.

Moundville phase sites in the Black Warrior Valley, Alabama: Preliminary Results of the UMMA Survey. Southeastern Archaeological Conference Bulletin 24:84-86.

Cottier, John W.

The Alabama River Phase: A Brief Description of a Late Phase in the Prehistory of South Central Alabama. Unpublished report submitted to the National Park Service, Macon.

Curren, Caleb (editor)

Archaeology in Southwestern Alabama: A Collection of Papers.

Alabama-Tombigbee Regional Commission. Camden, Alabama.

- Curren, Caleb, and Keith J. Little
 1981 Archaeological Investigations (1933-1980) of the Protohistoric
 Period of Central Alabama. Unpublished report submitted to
 - Period of Central Alabama. Unpublished report submitted to the Alabama Historical Commission, Montgomery.
- Fuller, Richard, and Noel R. Stowe
 - A Proposed Typology for Late Shell Tempered Ceramics in the Mobile Bay/Mobile Delta Region. In Cailup Curren (editor)

 Archaeology in Southwestern Alabama: A Collection of Papers, pp. 45-92. Alabama-Tombigbee Regional Commission, Camden, Alabama.
- Jenkins. Ned J.
 - 1981 Gainesville Lake Area Ceramic Description and Chronology.
 University of Alabama Office of Archaeological Research Report
 of Investigations No. 12.
 - Archaeology of the Gainesville Lake Area: Synthesis.
 University of Alabama Office of Archaeological Research Report of Investigations No. 12.
- Jenkins, Ned J., and Teresa Paglione
 - An Archaeological Reconnaissance of the Lower Alabama River.
 Unpublished report submitted to the Alabama Historical
 Commission, Montgomery.
- Mann, Cyril B., Jr.
 - Classification of Ceramics from the Lubbub Creek
 Archaeological Locality. In Christopher S. Peebles (editor),
 Prehistoric Agricultural Communities in West Central Alabama
 II., pp. 1-137. Submitted to U.S. Army Corps of Engineers,
 Mobile District, Contract Nos. C5861(79) and C5970(79).
 Copies available from U.S. Army Corps of Engineers, Mobile
 District.
- Marshall, Richard A.
 - Lyon's Bluff Site (220k1) Radiocarbon Dated. <u>Journal of</u> Alabama Archaeology 23:53-57.
- Peebles, Christopher S. (editor)
 - Prehistoric Agricultural Communities in West Central Alabama. Submitted to U.S. Army Corps of Engineers, Mobile District, Contract Nos. C5861(79) and C5970(79). Copies available from U.S. Army Corps of Engineers, Mobile District.
- Perino, Gregory
 - The Banks Village Site, Crittenden County, Arkansas. Missouri Archaeological Society Memoir No. 4.
- Phillips, Philip
- 1970 Archaeological Survey in the Lower Yazoo Basin, Mississippi, 1949-1955. Peabody Museum of Archaeology and Ethnology Papers No. 60.

- Sheldon, Craig T.
 - The Mississippian-Historic Transition in Central Alabama. Unpublished Ph.D. dissertation, Department of Anthropology, University of Oregon, Eugene.
 - n.d. Excavations at the Durant's Bend Site (1Ds1) Alabama. Unpublished manuscript.
- Smith, Gerald P.
 - Ceramic Handle Styles and Cultural Variation in the Northern Sector of the Mississippi Alluvial Valley. Memphis State University Anthropological Research Center Occasional Papers No. 3.
- Solis, Carlos, and Richard Walling
 1982 Archaeological Investigation at the Yarbrough Site
 (22Cs1814). University of Alabama Office of Archaeological
 Research Report of Investigations No. 30.
- Steponaitis, Vincas P.
 - 1980 Ceramics, Chronology, and Community Patterns at Moundville, a Late Prehistoric Site in Alabama. Unpublished Ph.D. dissertation, Department of Anthropology, University of Michigan, Ann Arbor.
 - 1983 <u>Ceramics, Chronology, and Community Patterns: An</u>
 <u>Archaeological Study of Moundville. Academic Press, New York.</u>
- Stowe, Noel R., Richard S. Fuller, Amy Snow, and Jennie Trimble
 1982 A Preliminary Report on the Pine Log Creek Site (1Ba462).
 Unpublished report on file at the University of South Alabama.