CHAPTER VI

SITE DISTRIBUTION AND SETTLEMENT PATTERN
IN THE MISSISSIPPI AND HISTORIC PERIODS

Introduction

Bruce Trigger (1968:239) has proposed that settlement patterns can be investigated on three levels, that of the individual building or structure, that of the arrangement of structures within single communities, and that of the distribution of communities over the land-By their very nature, area surveys such as that conducted in the Upper Tensas Basin do not yield equal amounts of information pertinent to each of these levels. Area surveys are perhaps the only way to investigate site distributions, but they are poorly suited to the requirements of research on the other two levels. information on site configuration can be obtained through surface artifact distributions or the arrangement of mounds, but buried buildings and features can only be investigated by means of extensive excavation.

These limitations of the area survey are reflected in the present chapter by the kinds of problems that are discussed. The first concern of this chapter will be with

site distribution in relation to hydrographic features in the Tensas Basin, particularly the several meander belt ridges and the active streams occupying them. Secondly, the configuration of mound sites will be discussed with attention focused on observable regularities in mound arrangements. Finally, our attention will shift to the problem of the relationship of ceremonial and habitation activities as these are reflected in site configurations and distributions.

Any conclusions reached concerning human settlement in the Upper Tensas Basin will, of course, reflect the nature of sampling procedures employed in the location of sites. It is apparent that two major factors have biased the site sample discussed here. To begin with, site accessibility and cover vegetation have certainly affected the number and kind of sites recorded. The most striking instance of this problem involves the Tensas River in tiers 23 and 24 where its course follows a meander belt ridge (Upper Tensas meander belt) attributed to the E-J stages of the Mississippi River. Relatively few sites have been recorded for this stretch of river -approximately 14 sites as opposed to some 40 and 26 sites respectively for equivalent stretches of the Walnut Bayou and Bayou Macon meander belts. Given the relatively great age of the meander belt, the paucity of sites in tiers 23 and 24 may be in part a reflection of less

desirable living conditions along that stretch of the river. Today this is probably one of the least developed areas in the entire basin. Probably more important factors, however, are the area's inaccessibility and its forest cover. Relatively few roads parallel the river in tiers 23 and 24, and a very small amount of land has been cleared for cultivation. With few farmers working the land, the assistance of local informants is decreased greatly.

Bias has also been introduced into the site sample by the fact that sites with mounds are easier to find than those without them. In two years of survey work, the LMS recorded a total of 160 sites in the Upper Tensas Basin. Probably 90 per cent of these are mound sites. Of the 59 Mississippi and historic period sites recorded, only 12 are without mounds. If we accept the proposition that settlement pattern at this time is of the vacant ceremonial center-dispersed settlement type (Phillips et al. 1951:316), then it can be concluded that the Survey recorded only a small percentage of the occupation sites in the Basin.

Site Distribution and Hydrography of the Upper Tensas Basin

Introduction

No analysis of site distribution and settlement pattern in the Alluvial Valley can be undertaken without making extensive use of Harold Fisk's study of the recent geological history of the Lower Mississippi Valley. Indeed, since the appearance of his report in 1944, most archaeological studies in the Alluvial Valley have relied heavily upon his data for chronological and ecological interpretations. One need only cite the correlation between geological and archaeological chronologies carried out by Phillips (Phillips 1970, Phillips et al. 1951) and Greengo (1964); the reconstruction of site environs by Ford at Greenhouse (1951), Jaketown (Ford et al. 1955) and Poverty Point (Ford and Webb 1956); or the identification of historic sites by Phillips (Phillips et al. 1951), Williams (1968), Ford (1961) and Neitzel (1965) to appreciate this fact.

With the advent of radiocarbon dating, correlations of sites or archaeological sequences with Fisk's channel sequence have lost much of their chronological usefulness (Phillips 1970:961). They are, however, still of immense value for ecological interpretation. The phase-channel correlation presented in the following pages is indeed of little value for establishing the temporal

dimensions of Plaquemine occupation in the Survey Area. It does, however, provide information on one important aspect of human settlement in the Upper Tensas Basin; the relationship of late prehistoric settlement to active and abandoned Mississippi River channels.

Geological History of the Upper Tensas Basin

Fisk divides the recent history of the Lower

Mississippi Valley into two epochs: an early period of

rising sea level, and a late period of standing sea level.

In terms of the geological history of the Upper Tensas

Basin, only the latter need concern us here.

The history of the late epoch, that of standing sea level, has been reconstructed from traces of stream activity exposed on the surface of the alluvial plain. The late stages are separated on the basis of such major changes as a shift in the position through which the stream enters the valley, an abandonment of a segment of a meander belt, or a shift in delta position. The drainage stages are designated by letters from A to J and by numbers from 1 to 20. The Al stage is the oldest of which traces are still preserved and stage 20 is the present drainage. Stages from Al through J are of unequal length and cover an interval of approximately 4,000 years; those from 1 to 20 are approximately equal in length and cover a period of 2,000 years. Separation of stages 1 to 20 is based on analogy to known migration of bends in the present river. Stages 17 to 20 correspond to mapped historic courses of 1765, 1820, 1880 and 1940. Stage 1 represents the time when the Mississippi and Ohio rivers first joined near Cairo, Ill. The designation of this and succeeding stages by numbers and the earlier stages by letters is largely a matter of convenience, used because it sets apart stages related to modern meander belts from those related to earlier stages of drainage evolution (Fisk 1944:37).

A number of events in the recent history of the Lower Mississippi Valley have affected the Upper Tensas Basin and in turn have had important effects on the prehistoric occupation of the area. These can be summarized as follows:

- 1) During stages A₁-C, the Arkansas River built up an extensive alluvial fan along the western wall of the Lower Mississippi Valley. A remnant of this fan, Macon Ridge, forms the western border of the Upper Tensas Basin. With an elevation of some 20 feet above the alluvial flood plain, Macon Ridge has undoubtedly been a significant ecological factor in the western part of the Basin.
- 2) During the period spanning at least stages H-1, the Arkansas River flowed through the Upper Tensas Basin, a good part of this distance along the eastern edge of Macon Ridge. The resulting meander belt ridge (Bayou Macon meander belt ridge) is today occupied by Joe's Bayou and Bayou Macon (Fig. 67). By stage 4, the Arkansas had abandoned this course, for one carrying it to the west of Macon Ridge through the valley of the Boeuf and Ouachita rivers.
- 3) During stages E-J, the Mississippi River passed through the middle of the Upper Tensas Basin, building up a relatively low meander belt ridge (Upper

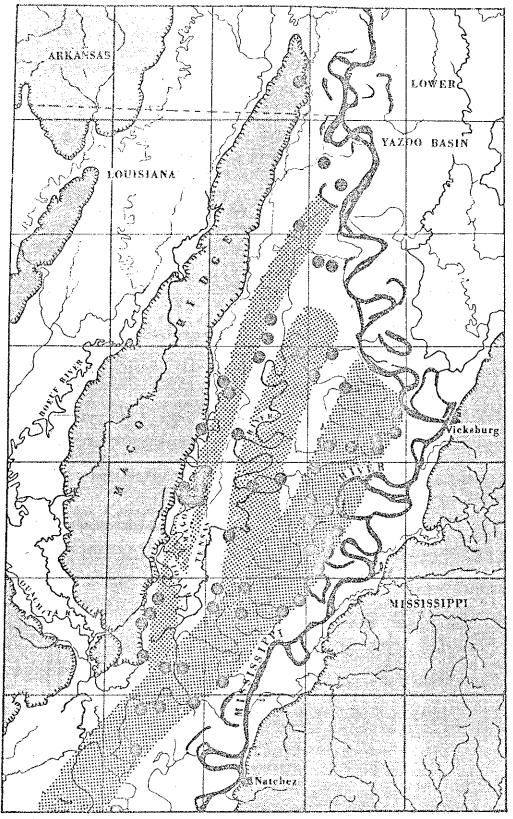


Fig. 67.--Meander belt ridges and site association in the Upper Tensas Basin

Tensas meander belt ridge) which is today occupied by the Tensas River.

- 4) Subsequently, the Mississippi shifted to the east and during stages 1-11 built up the meander belt ridge referred to by Fisk as the Walnut Bayou meander belt ridge.
- 5) In stage 11, a final shift in the course of the Mississippi River brought it against the eastern valley wall below Vicksburg, Mississippi.

Site Component-Channel Correlation

In the Survey Area, a total of 38 sites with components of Balmoral, Routh, Fitzhugh, Transylvania, or Taensa phase affiliation can be associated with late channels of the Mississippi River in its present and Walnut Bayou meander belts. Several of these sites have multiple components. Phillips (1970:516-7) utilizes only initial site occupation in his channel correlation study for the Lower Yazoo Basin. In the present study, subsequent occupations have also been utilized where there is good evidence for relating them to separate channels. Many sites with Plaquemine and historic period occupations in the Upper Tensas Basin also have earlier Balmoral components. For this reason, and because the earliest occupation consistently associated with the terminal channels in the Walnut Bayou meander belt are of

this phase, the present analysis has been extended to include all sites with Balmoral components.

The great majority of channel correlations have been made through the use of Fisk's Plate 22 (1944), a map showing the history of the present course of the Mississippi River in great detail. Portions of the Walnut Bayou course of the River lie beyond the area covered by this plate. In most of the few cases where sites were not covered by the map, channel associations could be worked out reliably by projecting meander bends beyond the limit of Plate 22. In a few instances, sites could be associated with the 10 stage channel course illustrated in another of Fisk's maps, Plate 15.

In his trial study, Phillips (Phillips et al. 1951:297-9) distinguished three types of site-channel relationships which could be used in correlations:

- 1) "Bankline": in which a site exists on the levee ridge of a channel and presumably was occupied when it carried the active Mississippi River, or subsequent to abandonment when it contained an oxbow lake.
- 2) "Mid-channel": in which a site is situated between the banks of a channel and could only have been occupied subsequent to abandonment and silting in of the channel.

3) "Inside bend": in which the locale of a site has been crossed by a channel and the site can only have existed subsequent to its passage.

Phillips felt that "bankline" associations were the most satisfactory type since they presumably provided both minimal and maximal dates for site occupation. "Bankline" associations provided reliable minimal dates because it was considered unlikely that a channel would migrate up to an existing site and be arrested in its movement before destroying the site. Such situations, if they did occur, would be so uncommon as to have no significant effect on the overall site-channel correlation. Tensas data do not support this conclusion. Out of the 38 tabulated sites, 6 have "bankline" associations with channels that definitely postdate initial site occupation. In all cases, there are at least two different channels present in the area, and the initial component is apparently associated with the earlier channel. cases are diagrammed in Figure 68. Probably the only time a "bankline" site can be safely assumed to not predate its channel is when there is only one channel in the immediate area. Presumably a site occupied prior to that channel would have been erected in backswamp. In the Upper Tensas Basin, there are 8 "bankline" sites of Plaquemine affiliation that exist near only one channel. These are:

Muir (24-L-5)

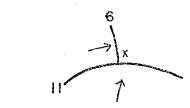
-10 stage, "bankline" (Indeterminate
 and Plaquemine components)
-16 stage, "bankline"

¥ 16

Quimby (24-L-6)

-6 stage, "bankline" (Deasonville component)

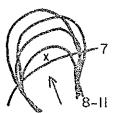
-11 stage, "bankline" (Balmoral and Plaquemine components)



Sundown (25-K-9)

-7 or 8 stage, "inside bend" (Sundown component)

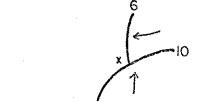
-11 stage, "bankline" (Fitzhugh component)



Formosa (25-K-19)

-6 stage, "bankline" (Sundown component)

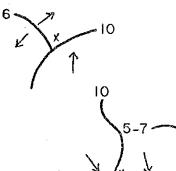
-10 stage, "bankline" (Balmoral and Plaquemine components)



New China Grove (25-K-21)

-6 stage, "bankline" or "inside bend"
(Indeterminate component)

-9-10 stage, "bankline" (Fitzhugh component)



Elkhorn (26-J-3)

-5-7 stages, "inside bend" (Indeterminate component)

-10 stage, "bankline" (Plaquemine component)

Fig. 68.--Sites with Multiple Components and Multiple Channel Associations.

DuRosset, Lake Providence, Cooter Point, Julice, Transylvania, Mound, Aubrey, and Yerger.

"Bankline" associations presumably provide reliable maximal dates because site occupation will occur only as long as the abandoned channel holds an oxbow lake, Phillips (ibid.: 300) calculated the average life span of an oxbow lake to be 2 stages or 200 years. The Tensas data indicate that this estimate is conservative. association of Balmoral phase with Channels 10-11 in the Walnut Bayou meander belt is well documented as will be shown presently. It is probable that Balmoral is the first phase during which settlements are erected along the terminal channel of the abandoned meander belt. Yet Fitzhugh phase sites are also commonly associated with this channel. In fact, more Fitzhugh phase sites are found on 10-11 stage banklines than any other. At least 400 years has probably elapsed, however, since those channels were abandoned. Another case that may be cited is the Transylvania phase type site which occupies the bankline of a 10 stage meander loop.

The hydrographic characteristics of a channel subsequent to its abandonment by the main stream are perhaps the most important determinant of amount and duration of occupation. Long-lived oxbow lakes or the presence of smaller rivers and bayous may result in

"bankline" occupation long after channel abandonment. It must be concluded from the foregoing that "bankline" associations do not necessarily provide an accurate estimate of site age.

As was the case in the 1951 trial correlation, the present effort is able to provide only minimal component dates; that is, it is possible to determine only the earliest date at which an occupation could have occurred, not when it actually did. In accomplishing this, only certain kinds of site-channel associations have been considered reliable: "bankline" associations where no earlier channel features are present; "mid-channel" associations; and "inside bend" associations. These will be referred to as "significant associations."

The component-channel association data are summarized in Table 54. Sites are listed by phase, and those sites with more than one occupation are listed under multiple phases. Those entries that are underlined represent significant associations.

Beginning with Balmoral phase, we find five sites situated on the inside bend of 7, 8, or 9 stage channels. Later channel associations include Dunbarton, which is located on the inside bend of a 10 stage channel, and

See Appendix I for more detailed descriptions of channel associations.

TABLE 54

ASSOCIATION OF COMPONENTS AND CHANNELS

Historic Taensa Phase

Beasley (24-L-14)	16 stage,	"inside bend"
Clark Bayou (24-L-9)	16 stage.	"bankline"

Fitzhugh Phase

Transylvania (22-L-3)	11 stage, "bankline"
Fitzhugh (23-L-1)	10-11 stage, "bankline"
Hopkins (23-L-10) 1	10-11 stage, "bankline"
DuRosset (24-K-8)	10 stage, "bankline"
Somerset (24-K-2)	10-11 stage, "bankline"
New Ground (24-K-12)	16 stage, "inside bend"
Elk Ridge (24-L-13)	15 stage, "mid-channel"
Alphenia (25-J-7)	
Sundown (25-K-9)	7-8 stage, "mid-channel"
New China Grove (25-K-21)	10 stage, "bankline"

Routh Phase

Rose Hill (21-L-2) 15 st	age, "bankline"
Lake Providence (21-L-3) 8, 11	13 stages, "bankline"
Compton Lake (23-L-9) 8 sta	ge, "mid-channel"
	ige, "mid-channel"
	age, "bankline"
Routh (24-L-7) 12 st	age, "mid-channel"
<u>Dunbarton (26-J-7) 10 st</u>	age, "inside bend"

Balmoral Phase

Compton Lake (23-L-9)	8 stage, "mid-channel"
Point Lake (23-L-16)	7 stage, "mid-channel"
Hopkins (23-L-10)1	10-11 stage, "bankline"
Balmoral (24-L-1)	8 stage, "inside bend"
Muir (24-L-5)	10 stage, "bankline"
Quimby (24-L-6)	11 stage, "bankline"
Routh (24-L-7)	12 stage, "mid-channel"
Ione Plantation (24-L-15)	8 stage, "inside bend"
Jim Bodman (25-K-2)	9 stage, "inside bend"
Mound Plantation (25-K-3)	10-11 stage, "bankline"
Hedgeland (25-J-4)	10 stage, "bankline"
Cooter Point (25-K-11)	10 stage, "bankline"
Steep Bayou (25-K-15)	Il stage, "bankline"
Formosa (25-K-19)	10 stage, "bankline"
Dunbarton (26-J-7)	10 stage, "inside bend"

TABLE 54 (Continued)

Plaquemine Culture

Tensas Bayou (21-K-4)	10 stage, "mid-channel"
Julice (22-L-2)	11 stage, "bankline"
Yerger (23-L-7)	11 stage, "bankline"
Mound (23-L-8)	10-11 stage, "bankline"
Kimbrough (23-L-21)	ll stage, "bankline"
Muir (24-L-5)	10 stage, "bankline"
Quimby (24-L-6)	ll stage, "bankline"
Hoover Lake (25-J-14)	10 stage, "bankline"
Cooter Point (25-K-11)	10 stage, "bankline"
Azucena (25-K-14)	11 stage, "bankline"
<u>Aubrey (25-K-10)</u>	ll stage, "bankline"
Formosa (25-K-19)	10 stage, "bankline"
Elkhorn (26-J-3)	10 stage, "bankline"
Indian Village (26-J-4)	10-11 stage, "bankline"

The channel associations of this site are rather complex. According to Fisk (Plate 22, Sheet 11), it is in the middle of a 9 stage channel, and on the "bankline" of 10 and 11 stage channels. With an Issaquena component present at the site, however, it seems unlikely that the 9 stage channel identification is correct. A stage 6-7 meander crosses the site locale, and initial occupation may be associated with this.

Cooter Point, located on a stage 10 bankline with no other earlier channel in the vicinity. Seven additional sites have stage 10 or 11 "bankline" associations, but earlier channels are also present. While these do not constitute significant associations, the sheer number of them constitutes evidence of a sort. Altogether, these data are interpreted as indicating a 10 or 11 stage channel association for Balmoral phase. The 12 stage significant association represented by Routh site would seem to be too late. It may be that Fisk is in error in his 12 stage identification here. The main channel does swing through the site area between stages 8 and 11, and it is possible that the Balmoral occupation is associated with the inside bend of the 10 stage channel.

For Routh phase, there are 3 significant associations with 7, 8, and 10 stage channels. The 15 stage "bankline" location of Rose Hill certainly does not represent the true age of that site. Fisk (Plate 15, Sheet 3) shows Arkansas River channels in this area, and it is possible that Rose Hill was located with respect to topographic features of that age.

On the basis of ceramic evidence, Fitzhugh phase is believed to have a duration of several centuries in the southern portion of the Survey Area. The significant association of Elk Ridge and New Ground with a 16 stage

channel indicates just how late this phase survives. At the early end of the phase, there are 3 significant associations indicating a date no earlier than stages 10 and 11.

Of the 14 sites with components identified only as Plaquemine culture, 6 have significant associations with 10-11 stage channels, and the remainder are all associated with 10 or 11 stage channels.

Of the historic Taensa sites, Beasley and Clark
Bayou, the former has a significant association with a
stage 16 channel while the latter is in all likelihood
also so associated. It is difficult to reconcile the
ceramic difference between Beasley and New Ground sites
and their similar channel associations. The ceramic
differences would seem to indicate a temporal gap of some
duration between them and yet both could have been
initially occupied at about the same time. It is possible
that considerable time, say 100 years, does separate the
two occupations and that the 16 stage cut off forming
Lake St. Joseph occurred some time before earliest FrenchTaensa contact.

Since Balmoral phase correlates with stages 10 and 11, and historic Taensa-late Fitzhugh phase correlates with stage 16, we can expect Routh and early Fitzhugh phase sites to be associated with intermediate channel

stages. No such associations occur in the Upper Tensas
Basin. Rather, the known sites with Routh, Fitzhugh, and
Plaquemine components are almost without exception
associated with the 10 and 11 stage channels in the Walnut
Bayou meander belt. This situation is the subject of
the following section.

Site Distribution

Physiographically, the Upper Tensas Basin consists of a series of meander belt ridges and adjacent backswamp areas (Fig. 67). Of the latter, the largest lie between the Bayou Macon and Upper Tensas meander belts in tiers 23-25, between Macon Ridge and the present Mississippi and Upper Tensas meander belts in tiers 20-22, and between the Upper Tensas and Walnut Bayou meander belts in tiers 23-24. The first two of these coincide with remnant areas of Arkansas alluvial fan surface (Fisk 1944:Plate 15, Sheet 3).

As is evident in Fig. 67, site distribution coincides well with the meander belt ridges; the intermediate backswamp areas are almost totally devoid of known sites. In the Mississippi and historic periods, all recorded sites occur either on one of the meander belt ridges or on Macon Ridge. The distribution of the 59 recorded sites is: 26, Walnut Bayou meander belt; 12,

Bayou Macon meander belt; 8, Upper Tensas meander belt; 8, present Mississippi meander belt; and 5, eastern edge of Macon Ridge.

By and large, streams that follow the four meander belt ridges today, conform fairly closely to the terminal Arkansas-Mississippi River channels in each. This means that high ground, in the form of levee ridges of the abandoned main channels, is present along the course of these streams and bayous. In short, suitable conditions for human habitation may have existed along these channels since the time when each meander belt was abandoned. We do not encounter the situation reported by Phillips (1969:437) for the Sunflower River in the Lower Yazoo Basin. That river, by and large, does not follow the terminal Mississippi River positions (stages C2 and D2), and hence, high broad levee ridges are not found in proximity to flowing water. Phillips recorded relatively few sites for this meander belt and suggests this is in part a reflection of unfavorable conditions for human habitation.

Relationship of Sites to Active Channels of the Mississippi River

In his 1951 trial correlation, Phillips noted that site distribution appeared to indicate that aboriginal settlement did not occur along Mississippi River

channels until after they were abandoned by the main The data from the Upper Tensas Basin supports Phillips' cautiously worded observation. Twenty of the 59 sites in the Survey Area occur along streams and bayous occupying the H stage Mississippi River channel and 1 stage Arkansas River channel. Here occupation is without doubt coexistent with these smaller streams--Tensas River, Bayou Macon, Joe's Bayou, and others. the Walnut Bayou meander belt, the situation is apparently the same. With evidence that Balmoral phase sites were erected on the stage 10-11 channels, it is certain that the sites of Routh and Fitzhugh phases were occupied only after the active Mississippi channel had shifted to its present meander belt. Much of the abandoned 10-11 stage channels are today occupied by streams or bayous. A total of 14 sites occur along segments of the 10-11 stage channels where such bodies of water exist. In an additional 4 instances, sites are situated some distance from the old channels, but along the bankline of a smaller stream that has meandered out of the old channel. Such situations are also evidence for occupation subsequent to abandonment of the meander belt by the active Mississippi River.

¹These are the terminal stages for the Upper Tensas and Bayou Macon meander belts.

Eight sites occur in the present meander belt of the Mississippi. Five of these, situated on oxbow lakes, can be demonstrated to post-date meander loop cut-off. Excavation at Transylvania site show Fitzhugh phase occupation post-dating clay and silt deposits in the natural levee which could not have accumulated when the meander was carrying the active river. Julice and Tensas Bayou are Plaquemine sites also associated with 11 stage channels, and, on the basis of the phase-channel correlation that has been worked out, must post-date meander cut-off. Early French accounts of the Taensa describe them as occupying the shores of an oxbow lake. Clark Bayou and Beasley sites apparently are to be identified with that historic occupation. Midden accumulation at both of these sites is light, suggesting that there is no great time depth to the Taensa occupation of Lake St. Joseph. Probably the entire occupation post-dates channel cut-off.

Lake Providence site can not be readily associated with any channel from stage 8 through 16. It is not possible to say what its relationship to the main Mississippi channel is. New Ground and Elk Ridge sites occupy ridge and swale topography inside the 16 stage oxbow lake where the French encountered the Taensa. On ceramic grounds these sites seem to be earlier than

Beasley and Clark Bayou. It is possible therefore that they were situated on the active 16 stage meander. It is also possible that channel cut-off occurred early enough that these sites also post-date that event.

In the present Mississippi River meander belt, site association with the contemporary, active Mississippi channel is improbable in five cases; possible, but not definite, in two cases; and indeterminate in one case. The author seriously doubts that permanent aboriginal settlement, including both ceremonial centers and agricultural hamlets, were normally situated on the banks of active Mississippi River channels during the Plaquemine and historic periods.

Phillips (Phillips et al. 1951:300) states that "in early historic times villages of Mississippi River tribes were often directly on the river bank." This statement is no doubt based in part on the ethnohistorical data pertaining to the Quapaw villages, some of which seem to have been situated directly on the river bank (ibid.:294-419). Of the historic tribes below the mouth of the Arkansas River, for which there is adequate ethnohistorical information relating to settlement location, not one is described as having villages on the bank of the active river. Tribes on the east side of the Mississippi either occupied the smaller rivers of

the Yazoo Basin (Tunica, Yazoo, Koroa) or the bluffs above the River (Houma, Natchez). The Tunica remnant, established at the mouth of the Red River after 1706, was situated on an oxbow lake (Swanton 1911:312). On the west side of the Mississippi, we find the Taensa occupying the shores of an oxbow lake, the Bayou Goula village situated 1/4 league from the River (ibid.:274), and the Washa, Chawasha, and Chitimacha situated along Bayou Le Fourche (ibid.:297, 306, 338).

Villages did front on the Mississippi in the sense that they had specific landings (Natchez and Taensa for example), and it is probable that at least some references by early explorers to villages they passed while traveling on the River (Phillips et al. 1951:Table 16) are referring to these landings and not the actual village. Given the Quapaw village locations as they are described, we can not generalize that Lower Mississippi River tribes never built their settlements on the active channel. Archaeology and ethnohistory do concur, however, that this location was infrequent.

In the normal course of events, the Mississippi River modifies its course by developing meander loops and eventually abandoning them. The oxbow lakes resulting from the Cut-off of a meander loop apparently provided excellent locations for settlement. They provided

stretches of quiet water flanked by levee ridges that were suitable for habitation and agriculture and may have been less susceptible to flooding. Furthermore, as lakes are incorporated into local drainage systems, there is the chance that fresh water mussels will inhabit them, thus adding a subsistence resource not available in the main channel. 1

Forty Mississippi and historic period sites can be associated with modern drainage features in the Survey Area. Of these, 10 are situated along the shores of oxbow lakes and the remainder occur on streams and bayous. In many of the latter instances, sites may have originally existed along oxbow lakes.

The abundance of Coles Creek and Mississippi period sites associated with the Walnut Bayou meander belt would seem to require some form of explanation. We can expect a relatively small number of sites along the present Mississippi course due to their destruction by the meandering river. Poor surveying conditions is doubtless partially responsible for the low number of sites recorded for the Upper Tensas meander belt. No such problems, however, exist along the Bayou Macon

According to Dr. W. J. Clench, Department of Mollusks, Harvard University, the Mississippi River carries too much silt for mussels to survive in.

meander belt, and one would expect a large number of sites here, since the meander belt is flanked by Macon Ridge. Proximity to two distinct ecological zones, alluvial valley flood plain, and highlands, must have resulted in some advantage in subsistence potential which would be reflected in a heavier settlement of the area. Nevertheless, even adding the 5 Macon Ridge sites to those actually situated in the meander belt gives a total of only 17 sites, a number substantially smaller than the 26 sites recorded for the Walnut Bayou meander belt.

Since the Thebes Gap Diversion, some two thousand years ago, the Mississippi River has shifted its meander belt only four times. Only one of these shifts occurred in the Upper Tensas Basin. The abandonment of meander belts then is not a common occurrence, and the resulting hydrologic conditions along the terminal channel in the old meander belt, must have been quite different from those resulting from the much more common meander loop cut-off. When the Mississippi River shifted eastward to its present meander belt below Vicksburg some one shousand years ago, a unique kind of ecological situation must have resulted along the abandoned 10-11 stage channel. Presumably this channel became a continuous "lake," perhaps as much as 100 miles

in length. As with oxbow lakes, levee ridges with high, inhabitable surfaces and friable soils flanked this "lake". How water level was maintained in the old river bed can only be speculated. Doubtless, the channel acted as a distributary for Mississippi River flood waters for some time, and initially, there may have been marked seasonal fluctuations in water level as a result. 2 Eventually the abandoned channel would be filled in and also incorporated into the local drainage system as is the case today with several different bayous and streams occupying the channel at various places. One major disadvantage would seem to characterize this "lake" from the standpoint of human occupation. Without the constant renewal of soil nutrients in the form of flood-deposited soils, land fertility along the 10-11 stage channel must have decreased through time.

laccording to Fisk (1944:Plate 22, Sheet 11), the old 10-11 stage channel would have been intersected by the 12 stage channel just north of Lake Bruin, or just north of Newellton, Louisiana, in stage 13. Below these points, it was not intersected again until stage 15, at a point just north of Waterproof, Louisiana. Continuous stretches of the "lake" would therefore be more like 30 or 40 miles long.

²This calls to mind Struever's observation on the availability of captive fish populations in Illinois River sloughs as a result of seasonal fluctuations in river level (1964).

The large number of Plaquemine sites situated along the Walnut Bayou meander belt is interpreted here as a response to the advantageous conditions that may have existed there subsequent to the Vicksburg Diversion in stage 11. It would seem that for some time at least the Walnut Bayou meander belt was preferred as a place to live over other areas in the Upper Tensas Basin.

The latest sites in the Survey Area, those classified as Transylvania, late Fitzhugh and Taensa phases, do not occur in the Upper Tensas or Walnut Bayou meander belts. Two late sites, Ulmer and Canebrake, are found along Bayou Macon, but the majority—1 Transylvania, 2 Taensa, and 2 late Fitzhugh phase sites—are associated with the present Mississippi River course. Perhaps the shift in settlement away from the Walnut Bayou meander belt in late prehistoric times reflects the disappearance of advantageous conditions this locality once possessed. We can speculate that factors such as decreasing soil fertility or the silting in of the old Mississippi channel were responsible.

Configuration of Mississippi Period Mound Sites

The configuration of mound sites in the Lower Mississippi Valley has received relatively little attention

from archaeologists. Ford (Phillips et al. 1951:310) has distinguished five types of sites with mounds. Belmont (1967) has been able to demonstrate changes in configuration which the Greenhouse site underwent during its nearly one thousand years of occupation. Lately Phillips (1970:963-8) has modified certain of Ford's conclusions concerning mound types and their cultural affiliation and has also noted certain types of site plans characteristic of the Lower Yazoo Basin, in particular, the semicircular embankment found on some Issaquena phase sites.

As noted in the introduction to this chapter, area surveys of the kind conducted in the Upper Tensas Basin can yield only limited information on site configuration.

One can make observations on number of mounds, mound shape and the spatial relationships between mounds, but little else. The important matter of mound function, of course, can not be determined without extensive excavation. Furthermore, at multiple component sites, individual mounds and total site plan can not be safely attributed to any one occupation without at least excavating a large number of test pits. Despite the fact that observations are severely limited by the nature of the data at hand,

¹ See Levi Straus (1963:142-3) for a social anthropologist's interpretation of the earthwork arrangement at one site, Poverty Point.

some attempt has been made to summarize the nature of Plaquemine period mound site configurations.

Of the 47 Mississippi and historic period mound sites surveyed by the LMS in the Upper Tensas Basin, mound building can be associated with a Plaquemine component at 18 sites. Eight of these sites -- Tensas Bayou, Joe's Bayou, Bear Lake, Grovell Place, Hoover Lake, Avondale, Aubrey, and Indian Village -- have only a single extant mound. Of these sites, 7 yielded small pottery collections. Although only Plaquemine components can be identified in these collections, their size does not allow us to rule out the presence of other components or the possibility of non-Plaquemine construction of the mounds. At the eighth site, Grovell Place, the pottery collection was obtained some distance from the mound and does not necessarily belong with the mound. The fact that there are eight of these single mound sites, however, makes it likely that at least some are of Plaguemine origin.

Two sites, Rose Hill and Somerset, have one known mound and possibly others that have been largely destroyed. Two hundred meters east of the mound at Rose Hill, a low rise with abundant artifactual material in plow zone, may mark a former mound. At Somerset, there are three very low rises marked by yellow clay and artifacts which may represent additional ceremonial structures. Perhaps some

of the eight sites mentioned above originally had multiple mounds also.

Three sites, Bloomfield Church, Fuller, and Azucena, have two mounds each. There are three mounds at the DuRosset site; two of these (Mounds A and B) lie within 60 meters of each other, but the third mound (Mound c) is separated from them by almost 200 meters. Surface collecting and test excavations around Mounds A and B produced only Fitzhugh phase pottery. Mound C was heavily overgrown and no pottery collection was obtained. At a distance of 70 meters from Mound C, on the bank of DuRosset Bayou, surface collecting yielded Fitzhugh and Balmoral phase pottery. There is a possibility then that two distinct ceremonial complexes are represented by these mounds, rather than one: a Fitzhugh complex consisting of Mounds A and B, and a Balmoral complex with one mound.

The remaining three sites that can be identified with Mississippi period occupations are large and have several mounds. Two of them, Fitzhugh and Routh, consist of a single plaza dominated by one large mound and surrounded by several smaller mounds. The third site, Transylvania, differs in having two plazas with the dominant mound in between and a ring of smaller mounds surrounding both plazas.

Both single plaza sites share several features which suggest a common plan: 1

- There is a single dominant mound with at least one ramp (Fig. 69).
- 2) The dominant mound is adjacent to an open area devoid of habitation debris which we can identify as a plaza.
- 3) A second mound of relatively large size faces the dominant mound from across the plaza.
- 4) The left hand side² of the plaza is bordered by a long, low mound. At Routh site, this mound has a single hump near its center. At Fitzhugh site, Hough's map shows the long mound to be composed of three small mounds joined by a low ridge.
- 5) The fourth side of the plaza is flanked by two mounds. Both are very low and insignificant at Routh, and one has been destroyed at Fitzhugh.

Fitzhugh site has only a single component, and there is no uncertainty about the authorship of the earthworks. Routh, on the other hand, has two strongly represented components, and there is a problem in assigning the mounds and the site plan to the correct components. Given the similarity of the Routh and Fitzhugh site plans, it is assumed that the former's mound construction occurred primarily during the Routh phase.

When standing with one's back to the dominant mound.

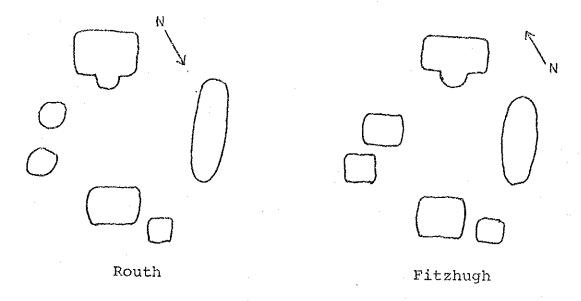


Fig. 69.--Plan of Routh and Fitzhugh Sites Showing Only Comparable Elements

- directions. At Routh, the dominant mound faces north-northeast, while at Fitzhugh, it faces south-southwest.
- 7) Both sites also have a small mound flanking the mound opposite Mound A.

In a survey of platform mound sites in the southeastern United States, Nelson (1969) found that site orientation seemed to be determined principally by features in the surrounding environment such as rivers or sloughs. The Fitzhugh site does seem to be oriented with respect to Walnut Bayou and the 11 stage Mississippi River channel. We can not be certain of the channel association of Routh site. The site does seem to be oriented with respect to the ridge and swale topography of the area. The dominant mound at Fitzhugh faces away from the former river, but at Routh, the dominant mound faces parallel to the ridge and swale topography. There may be more to site orientation in these two cases than merely conformity to local topographic features.

Differences also exist:

- 1) Mound A at Routh is flanked on one side by a small mound which is absent at Fitzhugh.
- 2) At Fitzhugh, there is a substantial mound located beyond the long mound. None exists at Routh today, and since the long mound there is situated on the edge of a swale, it is doubtful that one ever did exist.
- 3) Fitzhugh also differs in having a 2700 foot long ridge lying to the northwest of the mounds and plaza.

There are a number of single plaza, multiple mound sites in the Lower Mississippi Valley, and most are characterized by one dominant mound and large mounds on two or more other sides of a rectangular plaza. The truly distinctive feature of the plan described above is the long mound on the left side of the plaza. In the Lower Yazoo Basin, two sites, Magee (20-M-2) and Leland (19-M-1), possess this same feature. The long mound at Leland is oriented slightly differently from the remainder

At the Mott site (23-J-1) there is a long low ridge situated opposite Mound A and apparently in the middle of the plaza. Artifacts occurred in plow zone here, and it is possible that an actual mound structure is represented. Mott is a puzzling site. The distribution and quantity of Balmoral phase pottery would seem to indicate that the site configuration is the result of construction during that occupation. Several features of the site plan-size of Mound A and the row of low mounds flanking the plaza on the north, east and west-suggest, however, a Plaquemine date for major construction activities.

of the site, but perhaps it is only general position that is important to the plan. The second largest mound in both cases is located on the right side of the plaza instead of opposite the dominant mound, but there is a mound in that position also.

As it exists today, Transylvania appears to have two plazas separated by Mound A, the largest mound on the site. The southern plaza is clearly marked by large, well preserved mounds on three sides and several smaller mounds on the fourth. The north plaza is defined by a series of smaller mounds, two of which had been destroyed prior to LMS investigations at the site. In the total site plan, both plazas appear to be ringed by a series of low mounds. The picture is strikingly similar to that present at Winterville and Lake George in the Lower Yazoo Those sites also have two plazas separated by the dominant mound and surrounded by a ring of smaller mounds. In all three examples, one plaza has three large mounds, one at each end and the third on one side. Differences also exist. Both Lake George and Winterville are larger in area and size of mounds than Transylvania. Lake George is unique in being surrounded by a palisade and ditch.

Excavations at Transylvania show cultural material of both components widely distributed over the site. With the limited data available, it is not possible to say when

the site assumed its present configuration. Lake George, on the other hand, appears to have begun as a single plaza site, and when the second plaza was added, the first may have been abandoned (Phillips 1970:288-9). collections of pottery from Lake George indicate that Mound A and the west plaza were erected by Kings Crossing phase, and that beginning in Crippen Point or Mayersville phase the east plaza-mound complex was erected. embankment apparently dates to Lake George phase. Winterville site, according to Brain's research (1969: 243), was entirely constructed during Winterville phase. In the subsequent Deer Creek phase, occupation and mound construction appear to have been limited to the north plaza.

As noted above, the construction date of Transylvania site can not be determined with present data. Fitzhugh and Routh sites, so similar in many respects, are probably the product of two Plaquemine phases for which they are the type sites. Transylvania site is unique in the Upper Tensas Basin not only in site configuration but also because it represents the single known component of Transylvania phase. It is tempting to associate these two changes, ceramics and site layout, and see them both as introductions into the Survey Area.

With mound destruction a largely unknown factor at most sites and intensive excavation at only one or two sites, it is largely impractical to look for patterns in site layout in the Lower Mississippi Valley. Without Hough's map of Fitzhugh, that site would be considered to have a simple arrangement of four mounds around a rectangular plaza. The Mayersville site, according to Phillips' map (1970:Fig. 233), could actually have a double plaza arrangement similar to Transylvania. The presence of a few small mounds north of Mound A, would give this site such a layout. Without intensive investigation at Mayersville, we can have no idea of how many mounds may have been destroyed.

Mississippi period mound sites in the Lower Yazoo and Upper Tensas basins. Complete area wide uniformity should not be expected, but we should be able to see some specific mound types and site layouts recurring at different sites. The mound-plaza arrangement itself and the existence of one dominant mound in multiple mound arrangements are well accepted uniformities. The single plaza-double plaza arrangements and the arrangement of dominant mound-long mound as seen at Fitzhugh and Routh sites are probably also valid uniformities.

Ceremonial and Habitation Sites

The prevalent notion concerning settlement pattern in the southern portion of the Lower Mississippi Valley

during the Mississippi period is that sites with mounds were primarily ceremonial in nature, and that the greater part of the population affiliated with them lived in hamlets dispersed throughout the surrounding countryside (Phillips et al. 1951:343; Phillips 1970:967). Referring to sites classified as "Small Ceremonial Center," Ford states that,

The sites of this class seem to have served primarily as ceremonial centers rather than actual village sites. This is indicated by the paucity of refuse and the fact that most of the material found has come down from the houses that stood on mound tops or on low elevations around the plaza area. Not enough houses are indicated for the substantial populations which must have constructed and used these centers. Probably the people who used each of these mound groups lived scattered through the surrounding country somewhat after the arrangement of the Natchez Tribe in 1700 (Phillips et al. 1951: 316).

In its survey of the northern half of the Lower Mississippi Valley, the LMS apparently found no non-mound habitation sites of any age (Phillips et al. 1951:310).

Large, densely settled town sites are characteristic of the Mississippian phases (Malden, Cairo Lowland, Parkin, and others) in southeast Missouri and northeast Arkansas. Phillips (1970:967) has recently drawn attention to the distinction between these "town" sites and the vacant ceremonial center type of site, and notes that the latter is characteristic of Plaquemine culture. The implication of this distinction is that the vacant ceremonial center-dispersed hamlet settlement pattern may be an indigenous development in the southern half of the Lower Mississippi Valley and not a Mississippian introduction from the north.

In the Lower Yazoo Basin, Phillips (1970:967) found only a handful and as a result has raised an important and disconcerting question: If late period mound sites are essentially ceremonial in nature and the supporting population lived in dispersed settlements, why haven't archaeologists found more of these outlying hamlets? Obviously a partial answer lies in the nature of mound and non-mound sites. The former are usually prominent features of the landscape and widely known among local Village sites, if they are not completely residents. buried beneath recent alluvium, have to be searched for literally on hands and knees (Williams 1967:9) and being inconspicuous are not as likely to be incorporated into the stock of knowledge people possess concerning their locality.

In the 1964 field season, the author made a point of asking local residents about non-mound sites and was rewarded with the discovery of five small midden areas along Bayou Macon in tiers 23 and 24. Due to the demands of site excavation elsewhere that summer, the author was not able to make similar efforts in other portions of the Upper Tensas Basin. It is possible, therefore, that his success along Bayou Macon was largely the result of local geological conditions or of a local variation in prehistoric settlement pattern. The discovery of similar

sites along the shores of Lake St. Joseph by the LMS, however, indicates that this is not the case.

All told, 12 out of the 59 Mississippi and historic period sites recorded by the LMS in the Survey Area are non-mound habitation sites. Phillips has also recorded non-mound habitation sites of these periods in the Lower Yazoo Basin. Out of approximately 43 sites with Plaquemine and Mississippian components that he describes, the present author has counted 3 which appear to be of this kind: Landrum (22-N-10), Campbell (19-0-9), and Johnson (22-M-7).

Of the 12 habitation sites known for the Tensas

Basin, seven--Preston, New Hope, Chelly Landing, MacMurray,
Ulmer, Canebrake and Taxodium--are located on Bayou Macon
in tiers 23 and 24, four--Clark Bayou, Beasley, New Ground
and Elk Ridge--occur along Lake St. Joseph in the present
Mississippi River meander belt, and one--Frisbie--is
situated on the Tensas River in the meander belt of the
same name. None are known for the Walnut Bayou meander
belt. Fresh water mussel shell occurs at all Bayou Macon
sites, although not in great quantity. Four of these
sites--Preston, New Hope, Chelly Landing, and MacMurray-are marked by dark soil discolorations between 15 and 30
meters in diameter, in which shell and artifacts occur.
Preston differs slightly from the others in having actual

low mounds of midden approximately 30 cm. in height. Only 1 of the 3 midden areas at Preston is of Routh phase age, the other two apparently being of Balmoral phase affiliation. Two additional soil discolorations can be seen in the USDA aerial photograph lying north and east of Preston. Although not actually investigated on the ground, they are probably sites also. Ulmer site was probably similar to the above four sites; but it has suffered from erosion, and its location on the edge of the bank above Bayou Macon makes it difficult to reconstruct its original nature. Given the size of these several midden deposits, it is reasonable to identify them as the remains of single household settlements.

The other two occupation sites along Bayou Macon are Canebrake and Taxodium. The former is a mound site, but test excavations and other information indicate that the mounds date to Issaquena and Balmoral phases. Routh and Fitzhugh phase occupation deposits are found overlying Mound A and in low rises to the west of Mound A. Field data for Taxodium indicates only that it has no mounds and that shell is present in the midden deposits. This site has a Balmoral component also.

The Lake St. Joseph sites apparently lacked soil discoloration and shell debris, being represented only by thin scatterings of artifacts. Little is known of the

nature of cultural deposits at Frisbie site of the Tensas River. The area was heavily overgrown, and midden was encountered only in test pits. With no mounds in evidence at the site, it is apparently a habitation site.

In the Yazoo Basin, two of the three habitation sites recorded by Phillips (Landrum and Campbell) are described as small midden areas. The third, Johnson, consists of "a group of small house mounds" (Phillips 1970:515). Campbell is located only a few miles from the multiple mound site, Jaketown, and is a Wasp Lake phase site. Phillips (1970:391) comments on this site as follows:

Assuming that Jaketown was an important center in Wasp Lake times, this is the kind of outlying hamlet that we might expect to find in considerable numbers. Actually we found very few of these sites, perhaps because our surveys have not been sufficiently intensive.

Non-mound habitation sites then do exist in the Upper Tensas and Lower Yazoo Basins. Site surveys limited to intensive investigation of relatively small areas—an oxbow lake, or a section of Bayou Macon, or of a terminal channel in the Walnut Bayou meander belt—and employing aerial photographs and a good deal of leg work ought to result in the discovery of these sites in quantity.

Having found non-mound habitation sites, the question of the nature of Plaquemine and historic period settlement pattern is not resolved. The concept of vacant

ceremonial center-dispersed settlement is certainly too gross a characterization for the actual prehistoric situation. A look at the information available on settlement pattern of historic tribes in the Lower Mississippi Valley should demonstrate the complexity of the phenomenon we are dealing with.

The Natchez occupied several villages. Swanton (1911:46) notes that the cabins comprising these villages were so dispersed as to be more accurately characterized as constituting neighborhoods than villages. At the Grand Village, two earth mounds separated by a plaza bore the cabin of the Great Sun and a temple-charnel house structure. Flanking the plaza were eight or so cabins occupied by old men. There may have been some concentration of settlement in the vicinity of the ceremonial complex.

The Taensa, comprising between 6 and 9 villages, were strung out along the shores of a single oxbow lake. Iberville (Swanton 1911:266) estimates 150 cabins were situated along 2 leagues of lake front. Near the center of the lake, there was a palisaded area in which were located the temple, the chief's cabin, and 7 or 8 cabins

Between 6 and 10 villages are mentioned depending upon the ethnohistorical source consulted (Swanton 1911:45-7).

of "old men," all buildings apparently surrounding an open plaza (ibid.:263). LMS investigations along the shores of Lake St. Joseph would seem to support this picture of a dispersed population.

Taensa and Natchez are relatively similar in having a ceremonial precinct and dispersed settlement. These people conform to the settlement pattern type hypothesized by archaeologists. The Bayou Boula village, on the other hand, was, according to Iberville (Swanton 1911:274-5), palisaded and contained 2 temples and 107 cabins. Quimby's (1957) investigations at this site support this picture of a concentrated settlement. Perhaps the most interesting settlement type is that reported for the Houma, who resided on the bluffs east of the Mississippi. According to Iberville (Swanton 1911:286), the Houma village consisted of 140 cabins arranged in a double (concentric) circle around an open, public square. Here also is a large town with ceremonial precinct represented at least by the open area within.

Other tribes in the southern portion of the Alluvial Valley are not described in sufficient detail to allow determination of settlement pattern. The Acolapissa, for example, in 1772 were described as constituting a village with 200 warriors (Swanton 1911:283). The question is what constitutes a village? Was it a neighborhood in

the Natchez fashion, or an actual concentrated settlement?

Some generalizations can be made about settlement patterns in the southern half of the Lower Mississippi Valley from the limited ethnohistorical information available. All nations appear to have had a ceremonial precinct, whether it consisted of merely an open plaza, or was complete with mounds. Among some people (Houma and Bayou Goula), a large population, if not the entire society, was concentrated around this precinct. As an alternative, only special people—"old men", "Tattooed Serpent"—resided around the ceremonial precinct, and the majority of the population was dispersed in the surrounding countryside.

The archaeological data from the Upper Tensas
Basin multiple mound sites tends to conform to the latter
situation. Fitzhugh and Transylvania sites both have
habitation debris in sufficient quantity to indicate
residence by some people at the site. At Transylvania,
a posthole traverse of the south plaza from Mound A to
the western edge of the site encountered midden deposits
only along the western edge of the plaza. Posthole
testing in 3 of the 5 low rises on this side of the plaza
encountered midden deposits and indicates that these
mounds may have been habitational in nature. Two other

mounds, however, consisted only of sterile sandy soil.

Cuts 3, 4, and 7 showed wall trench structures and midden deposits on the west and east sides of the south plaza, and east of the north plaza.

The Fitzhugh site likewise had a zone of occupation around its plaza. This was evident in posthole traverses of the site, distribution of surface artifacts and test cuts. Test excavations between Mounds A and B indicate furthermore that low mounds associated with occupation debris probably existed on the edge of the plaza between the taller ceremonial mounds.

Some residence seems to have occurred at both Fitzhugh and Transylvania. It is tempting to speculate that, as in the case of the Natchez and Taensa, those people residing there were of special social status.

Routh site diverges from the above situation in that virtually no occupation deposits have been found at the site. Midden encountered in Cuts 1, 2, 3, and 5 was apparently beneath mounds. Cultural material in Cut 4 is probably slope wash from Mound E. Whatever kind of occupation occurred at Transylvania and Fitzhugh sites apparently did not occur at Routh.

It is difficult to evaluate the evidence for domestic activities at Fitzhugh and Transylvania. How much of the population supporting and affiliated with

these ceremonial centers actually resided at the sites? This question can not be answered, if at all, without considerably more investigation of these sites and their surroundings. Considering the size of Transylvania and Fitzhugh, the amount of construction represented by their mounds, and the relatively restricted area in which occupation debris occurs, it seems probable that only a portion of the supporting population was in residence. This and the known existence of small, presumably habitation sites, suggest that during the Mississippi period the vacant center-dispersed settlement situation did exist in the Upper Tensas Basin.

The lesson of the ethnohistorical data, however, is that alternative settlement patterns existed among various historic peoples in the Lower Mississippi Valley. We can not assume a dispersed settlement pattern for any particular time or place without supporting archaeological evidence. The Plaquemine inhabitants of the Walnut Bayou meander belt may have had dispersed settlement while a different tribal group on Bayou Macon may have had a more nucleated form of settlement. Even with the archaeological evidence in hand, we must proceed with caution when inferring settlement pattern. Those small midden deposits in tiers 23 and 24 along Bayou Macon may represent seasonal camp sites occupied by people who spent the greater part of each year residing in a large village.