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Archeological Investigation of Bayou Bartholomew, 1969

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ABSTRACT

Archeological investigation along Bayou Bartholomew in Ashley County was initiated with the primary objective of establishing a chronological sequence of prehistoric cultures. This paper reports the first season of fieldwork. Emphasis was placed on locating sites and obtaining adequate surface collections while only two sites were tested. The different types of sites and their relationship to the Bayou Bartholomew channels are discussed. Prehistoric occupations from four general periods are outlined, including late Archaic, early to middle Woodland, late Woodland and Mississippi.

At the beginning of the nineteenth century that portion of Arkansas lying south of the Arkansas, east of the Ouachita and west of the Mississippi rivers was known as an extensive, gloomy, uninhabitable wilderness of mosquito-infested swamps dominated by cypress, tupelo gum and cane. It was thought to be used by Indians only as a hunting territory and it remained relatively unexplored through out the early period of archeological investigation in the Mississippi valley. Cyrus Thomas located sites south of the Arkansas River in 1894 and C. B. Moore investigated sites on the Arkansas, Mississippi, Ouachita, Saline and Bartholomew rivers between 1908 and 1913. These men located neither large, spectacular sites nor cemeteries with large numbers of pots and other desirable museum items. The region was largely ignored in the succeeding 50 years. The survey of the Mississippi Alluvial Valley by Phillips, Ford, and Griffin in the early 1940's and the work of Ford and Redfield in 1962 barely touch upon the area. None of the prehistoric sites have been excavated and reported on by a professional archeologist.

Our knowledge of the archeology of this region is therefore minimal. Perhaps the lack of archeology is a reflection of the prehistoric situation, that is, it has not attracted attention because it was always marginal to centers of development in other areas. Even if there was no cultural climax here, it should be a zone of contact between climax regions. It lies between northeastern Arkansas, the southern portions of the lower Mississippi valley and the Red River area of Texas, Louisiana and Arkansas. These regions each have centers of distinctive local development where extensive archeological work has been done. The nature of contact between the Mississippi Valley and the Red River valley and between the lower and central Mississippi valley regions has been the subject of much debate. Questions cannot be resolved without information on the developments in the intervening region.

The Bayou Bartholomew area was chosen for the initial investigation in southeastern Arkansas for a num-

ber of reasons, some theoretical and some practical. First, the bayou is on the western edge of the delta and the physiography is much the same as in other portions of the Mississippi Alluvial Valley. Despite this physiographic link with the Mississippi River area, the stream is in the Ouachita River drainage system and was once the main channel of the Arkansas River. Second, it has been used as a boundary for the definition of archaeological regions although little is known about the area itself. Third, almost the entire area is under cultivation and sites are thus easy to locate. These sites are also rapidly being destroyed by the increasing mechanization of agriculture and need to be investigated before they are gone. Fourth, some Arkansas Archeological Society members have made the work easier by accurately reporting site locations, donating surface collections from the sites, and generally being helpful in every way possible.

Two distinct physiographic units are included in southeast Arkansas, locally termed the "delta" and the "hills". The division between them is an abrupt escarpment. The delta portion is flat and is almost entirely converted to large-scale mechanized agriculture of cotton and soybeans. The hills were cleared for small subsistence farms in the early nineteenth century but the soils are too poor in quality for good crop production and are now covered with tree farms of southern pine.

Geologically, the "hill" portion is called the Prairie Terrace and is Pleistocene in age. The "delta" portion is Recent in age and is the Arkansas River alluvial fan. This portion of the alluvial fan has two units, Macon Ridge and the Boeuf Basin. The Boeuf Basin encompasses most of the delta in southern Arkansas and Macon Ridge separates this Basin from the Mississippi River floodplain. The Boeuf Basin has never been part of the Mississippi River system, rather it has always been Arkansas River drainage, paralleling the Mississippi and draining into the Ouachita River.

The major features of the Boeuf Basin are the Ar-

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Arkansas River meander belts that are now occupied by smaller streams. H. N. Fick's study of the Mississippi valley placed the Arkansas River channels in a sequence: Stage B3 was along the edge of the Prairie Terrace, Stage C in Crooked Bayou and Boeuf River, Stage H in Bayou Macon, Stage 4 in the series of small bayous 2 to 6 miles east of Bayou Bartholomew, Stage 11 in Bayou Bartholomew and Stage 12 in the present channel. Roger Saucier, geologist with the U. S. Corps of Engineers Waterways Experiment Station, Vicksburg, has recently undertaken a geological study of the Boeuf Basin. He estimates that the deposits in the Bayou Bartholomew area are less than 5000 years old.

Bayou Bartholomew flows in an entrenched meander belt from Pine Bluff, Arkansas, to Monroe, Louisiana. The Bayou is bordered by sandy natural levees built up to an elevation of 125 feet mean sea level. The land between the Bayou and the Terrace is less than two miles wide and is a backswamp deposit with a drainage system distinct from that of the Bayou. As is typical of a meander belt, the present channel of the bayou is lined with abandoned channels and oxbow lakes, some of which are characterized by open water while others are almost completely filled in. Today the bayou is a slow-moving stream throughout most of the year. The area escaped the great floods of 1874 and 1882, but was flooded in 1927.

The initial investigation of the Bayou Bartholomew area concentrated in Ashley County in the vicinity of Portland. The project started with a core of forty-two sites located and reported by members of the Arkansas Archeological Society. These sites are primarily along the east bank of Bayou Bartholomew and on Dry and Big Bayous in Chicot County. The tributaries of Big Bayou drain the backslope of the Bayou Bartholomew levee and Big Bayou flows south, paralleling the Bartholomew, six miles to the east. These streams carry little water most of the year. This is the location of the Stage 4 channel of the Arkansas River. One month of site survey in June, 1969, added 22 sites to the list. Most of these are located on the west side of the Bartholomew. The area of intensive archeological work extends along both banks of Bayou Bartholomew from Parkdale to Boydell, a distance of 18 miles north-south on a straight line. Within this area, especially between Montrose and Boydell, there are still portions to be investigated. Two sites tested are the Wilson Brake site, 3AS85, and the Ellis Pugh Site, 3CH20 in July, 1969; Burney McClurkan tested the Grampus Site, 3AS84, in June 1968. All are multiple component with little indication of stratigraphic separation of these components.

The most common type of site is termed "diffuse" and is characterized by a scattered distribution of artifacts including both projectile points and grinding stones but without much pottery. There is no darkening of soil color to distinguish site area and the artifacts are often apparently eroding out of the red clay subsoil.

A second type is termed a hamlet and has a heavy

concentration of artifacts easily distinguished by the sterile surrounding soil. These are usually small, less than 100 feet in diameter, and often characterized by a darker soil color. Potsherds are abundant. Sometimes they also have bone and shell debris, while stone is scarce.

The third type of site is termed a village because the midden accumulation covers a more extensive area. These sites are usually oblong, up to 1000 feet in length, and contain relatively large amounts of pottery and lesser amounts of stone. There are seven village sites and three of these also have small mounds.

The fourth type of site is a mound site. These are differentiated because they are prominent mounds but a village area has not yet been located. Two of the mounds may be flat-topped pyramidal mounds while the other six are so altered that the original outline is no longer evident.

In general, the different types of sites have different location in relation to the bayou and its abandoned channels. Most of the diffuse sites are situated on the banks of the abandoned channels. All of the abandoned channels so far checked for sites are lined with a scattering of artifacts but with one or more relatively concentrated areas. These concentrations are more sparse and scattered than the hamlet and village site concentrations.

Most of the village and hamlet type sites are located on the present bayou channel. Seven of the eight mounds are also located on the banks of the present bayou channel. The situation along the oxbow lakes is in marked contrast to that on the abandoned channels as only six sites are on the banks of these lakes.

There is, of course, no reason to think that all abandoned channels are the same age or that all oxbow lakes are the same age, although most of the oxbow lakes are probably younger than most of the partially filled abandoned channels. Also, the lakes or sloughs in the oxbows and abandoned channels may have been considered desirable site locations and chosen in preference to the bank of the river so that there will not be a direct, one-to-one correlation of site age to channel age.

Only two sites have so far been located in the backswamp area between the bayou and the hill escarpment. This may be due to the fact that sites have been buried by flood-deposited alluvium. More likely is the fact that we have not yet looked here for sites. The two that have been located were reported by local residents. One is apparently a single component late prehistoric village and the other is a diffuse late Archaic site.

The situation along Big and Dry Bayous is somewhat different. Three of the sites are villages, one is a hamlet, and there were three mounds, two of which have been leveled. The other sites are small, sparse concentrations scattered along the banks of the bayous. These are characterized by a predominance of pottery with some stone debris but no heavy concentration or change in soil color.

A phase sequence of the area will not be defined until after the second season of work is completed, however, some trends are already clearly evident. For general comparative purposes, I am using the periods and cultures of the Lower Mississippi Valley as defined by Philip Phillips. The major problem in analysis and interpretation is the fact that this region is marginal to areas where extensive work has already been done but in which separate lines of analysis have developed. The Bartholomew ceramic analysis is based strictly on sherds and yet decorative techniques overlap regions while pottery types are actually distinguished by paste, design style and vessel form. For example, a shell-tempered potsherd decorated with trailed-incised lines might be classified as Wallace Incised, Foster Trailed, Keno Trailed or Leland Incised. Clay-tempered pottery decorated with narrow incised lines in multiple parallel line designs might be Manchac Incised, Alligator Incised, Dunkin Incised or even Pease Brushed. Further complications are added when allowance is made for characteristics that may be distinctive for this region alone.

Some general conclusions about the ceramics of the area can be made, however. Common vessel forms are straight sided vessels with rounded bases. Some flat bases, both round and square, are present but are a distinct minority. Bowls are also common. A minor variation of these has a slightly flared rim. Rims are predominantly unmodified or tapered although nicking of the exterior edge of the lip is a minor variation. Absent are appendages, handles, and effigy forms. Shell tempering, when present, is always a minor percentage of any site sample and the shell is always finely crushed. Bone tempering is also present at many sites. The sherds with bone do not differ from the Baytown Plain except for the addition of finely crushed bone and it is always a minor inclusion in the paste. The amount of sherds with bone ranges from 0.5 to 11.0 percent of the Baytown Plain sample at the site and is usually 5 to 7 percent. Bone tempering is also present in some decorated types, all of which are considered part of a late occupation of the area.

The earliest occupation is in the late Archaic period. The distinction between late Archaic and early Woodland is not yet established as only three sites in the area do not have any potsherds. Sites with early diagnostic artifacts are the diffuse sites on the abandoned channels of Bayou Bartholomew. Gary Stemmed points are common artifacts and these are usually made of novaculite. Worked and unworked flakes are common on these sites and 43 percent of the worked flakes are of novaculite. Relatively large, trianguloid, bifacially flaked tools are also common. Minor yet distinctive artifacts include both chipped and ground celts and adzes, spearthrower weights, magnetite plummets and crude biconical clay balls. Three sherds from the Grampus site are identified as Tchefuncte Stamped and Lake Borgne Incised.

An early to middle Woodland occupation is indicated by the presence of Withers Fabric-impressed, Marksville Stamped, Marksville Incised and Churupa Punctated

pottery types at five sites. One of these sites is on an abandoned channel, two are on oxbow lakes and two are on Dry Bayou. The Wilson Brake site has both an early Woodland-Marksville and Plaquemine-like occupations. A conical mound was located off one end of the midden area. Since this mound has been leveled, we will never know much about it. Reports indicate, however, that no bone and little pottery was uncovered during the leveling. When the flat-based vessel form occurs, it is usually on one of these sites. These sites also have Gary Stemmed projectile points but the specimens are usually smaller and less crudely shaped than on the Archaic sites.

The succeeding Baytown and Coles Creek periods are more of a problem. Most of the diagnostic pottery types for these periods have not yet been found. Minor amounts of Mulberry Creek Cord-marked, Larto Red Filled and Woodville Zoned Red types are present only at the Ellis Pugh site, 3CH20, and French Fork Incised is present at the Hackett site, 3CH32. Both of these sites are in the Dry-Big Bayou area east of Bayou Bartholomew and both are multiple component. A few sherds of Mulberry Creek Cord-marked are also found on some Bayou Bartholomew sites. Diagnostic Coles Creek culture ceramic types such as Coles Creek, Greenhouse, Mazique and Beldeau Incised and Chevalier Stamped are completely absent in the entire survey area. Twelve of the 50 sites on Bayou Bartholomew, however, have only Baytown Plain pottery. These sites are all rather nondescript but, since not all have been visited in the past year, the surface collections are not as complete as at some of the other sites. Two of these sites have small, badly damaged mounds. Perhaps the relationships of the Bayou Bartholomew region during the Marksville, Baytown, and Coles Creek periods are strongest with the Lower Arkansas River region to the north. An alternative is that the sites of the Baytown and Coles Creek periods are not in the delta but are on the Terrace where we have not yet looked for sites. It is also within the realm of possibility that the Arkansas River shifted to its present channel about this time. If so, the environmental conditions of the Bartholomew area might not have been very stable or desirable.

The late prehistoric occupation is clearly related to developments in the south. For the moment I am using the term "Plaquemine-Caddoan" because the material seems to be related to, but separate from, both of these. Most of the hamlet type of sites as well as components of the village sites were occupied at this time. Sites are located on the present channel of Bayou Bartholomew and on Dry and Big Bayous. Single component hamlet sites do not have much stone debris present. Projectile points are tiny, barbed and bulbous stemmed and are probably related to the Alba Barbed type. Pottery types include Plaquemine Brushed, Harrison Bayou Incised, Manchac Incised and Evansville Punctated. All of these have parallel Caddoan types. In the Bayou area these types have a minor percentage of sherds with bone tempering. I assume that the Baytown Plain bone tempered sherds are also part of this phase. Minor amounts

of shell-tempered sherds are present on some, but not all, of these sites. I would not interpret this as an intrusion of Mississippian culture. As at Plaquemine and Caddo sites, shell tempering appears to be an addition to an already well-established pattern rather than part of a drastic change. Pottery decorative techniques and styles are within the range of Leland Incised and Keno Trailed. The distinctive Caddo engraved pottery has not yet been found.

Valuable information has come from this initial fieldwork, especially in regard to settlement patterns and conditions of sites. Questions of chronology and interpretation can now be stated and will provide the guidelines for a second phase of research emphasizing site excavation. It should then be possible to establish a chronological sequence of phases and reach some conclusions about cultural-environmental interaction and interregional relationships.

Profiling Techniques In Archaeology

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Introduction

The purpose of this paper is to describe various techniques used in archaeology to record graphically soil strata, features, and in-place artifacts of trench or pit walls. The advantages and disadvantages of these techniques will also be described. Presently, however, I would like to discuss some of the basic tools of the profiler.

Tools

The most important tools of the profiler are, of course pencil and paper. I myself have found a number two pencil best for the job, since its heavy, black marks are easily seen even in the bright sunlight encountered, more often than not, in the field. Profiling often entails recording minute details, therefore distinct markings and drawing are essential to accuracy. Standard rule graph paper seems to be best for recording graphic details. It is available in large rolls and can easily be cut to size to fit the profiler's needs. An excellent drawing board can be made simply by taping a piece of graph paper to a plywood board of a size which can be conveniently handled. In trench profiling the board can be suspended from two sticks of wood placed across the trench. Large gum erasers are handy not only for erasing mistakes but also for removing dust and dirt that constantly and consistently get on the graph paper. A twelve-inch ruler with the English and metric scales is a tool which also should be included in the profiler's basic kit. Another important tool is a metal tape measure which is used to measure the dimensions of whatever is being recorded and its distance from a reference point. A trowel is used to plane the trench or pit wall for easier profiling. Freshly cut walls show features and strata more clearly than walls which have dried out in the sun or have been mottled by rain. For heavier cutting, a small profiling shovel with a straight, flat blade is best. Ice picks or small, pointed

sticks can be used to mark artifacts, features, or strata to which the profiler wishes to pay particular attention. An Army surplus field pack is a convenient carry-all for the smaller profiling tools and small luxury items such as insect repellent, suntan lotion, and a transistor radio.

There are larger tools which are important to the profiler. A long handled shovel and a mattock are needed when the profiler needs to move large amounts of dirt rapidly. A round-point shovel is best for breaking ground and a flat-nose shovel is best for levelling a trench or pit floor. Water sprayed from a large, refillable, pump spray can often help distinguish different strata and features temporarily for the profiler, especially in strong sunlight. However, I have found it easier and more convenient to shade the area to be profiled. Shading seems as effective as spraying in making distinct those features to be drawn. Also, operating the spray can becomes quite awkward and time consuming.

A grid screen and a horizontal-vertical string system are used as large measuring tools in profiling. The grid screen is constructed in the shape of a rectangle with the use of small and light, but strong, boards. Eyelets are screwed into the inside surfaces of the boards at regular intervals based on the metric scale. Ten centimeters is a common interval used. String is then tied to the eyelets to form a grid screen within the structure. The length and width of the grid screen should be chosen in a size best suited for the intended job.

Once the grid screen is properly set up, it provides a very accurate measuring device; however, the grid screen is difficult to set up properly. The screen is hung from sawhorses placed across the trench or pit. In the case of the trench, the trench surface is usually rough and uneven. The grid screen and the sawhorses have to be moved each time a grid profile is finished. Time-consuming adjustments have to be made again and again