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PROGRAM

THE TWENTY-THIRD SOUTHEASTERN ARCHAEOLOGICAL CONFERENCE

Session I: REPORTS ON CURRENT FIELD WORK IN THE SOUTHEAST  
Chairman: William G. Haag

Arkansas	Louisiana	North Carolina
Alabama	Mississippi	South Carolina
Florida	Missouri	Virginia
Georgia	Kentucky	West Virginia
	Tennessee	

Session II: LOUISIANA AND GULF COAST ARCHAEOLOGY  
Chairman: Stephen Williams

Coastal and Eastern Texas . . . . .	Edward B. Jelks
Coastal Louisiana . . . . .	Sherwood Gagliano
Coastal Alabama . . . . .	E. Bruce Trickey
Upper Red River . . . . .	Stephen Williams
Lower Yazoo River . . . . .	John Belmont
Upper Tensas River . . . . .	David Hally

Session III and IV: THE NORTH AMERICAN FORMATIVE  
Chairman: James A. Ford

## COASTAL AND EASTERN TEXAS\*

Edward B. Jelks

Southern Methodist University

The locally made pottery at McGee Bend can conveniently be classed into three wares on the basis of paste characteristics: (1) sand-tempered ware, usually plain but occasionally decorated with incised or incised-punctated designs; (2) clay-tempered ware, occurring with a variety of decorations made by brushing, incising, punctating, engraving, and other techniques; (3) shell-tempered ware, plain or decorated, of very rare occurrence in the area.

### SAND-TEMPERED WARE

Virtually all of the sand-tempered pottery is plain, only 11 of the 2,978 total sherds being decorated. No complete or reconstructable vessels were found, but study of the sherds revealed what many of the original vessels must have looked like. All of the plain sherds were classed as type BEAR CREEK PLAIN, a new type defined here for the first time; the few decorated sherds are not identified with any specific types.

### BEAR CREEK PLAIN

METHOD OF MANUFACTURE: Coiled.

PASTE: Temper--Sand. Microscopic examination reveals that the sand particles--which are present in great abundance--are rounded rather than angular and therefore are evidently derived from waterlaid deposits. The particles are all quartzitic except for an occasional one resembling feldspar, and their size is small and rather uniform. Large grains are totally absent. The rounded surfaces of the sand grains result in a paste with low tensile strength, a factor which caused the vessels to fracture easily, especially along coil lines.

Texture. The high sand content produced a paste with the texture of friable sandstone, and in many instances sand particles come off readily when a sherd is rubbed between the fingers. While the abundant use of sand as a tempering agent is a characteristic feature of the paste, rarely a sherd can be found that contains a small quantity of pulverized bone in addition.

Color. Surface colors are mostly dark shades of gray and brown ranging to black, but lighter shades, principally tan and buff, also occur as well as a few sherds of reddish-brown. Core colors are similar to surface colors, but they frequently run somewhat darker.

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\*This article is a portion of Jelk's PhD Dissertation, THE ARCHEOLOGY OF MCGEE BEND RESERVOIR, TEXAS, University of Texas, 1965.

Surface finish- Surfaces are typically undulating or bumpy and are usually poorly smoothed. Some sherds, however, have been well smoothed. Because of the friable paste, the surfaces have frequently been eroded, and sherds without the original surface, or retaining only patches of it, are not uncommon.

FORM: Wall thickness- 5 to 10 mm., with the average between 6 and 8 mm.

Lip- Typically, the vessel wall thins, sometimes quite drastically, at the upper part of the rim and tapers to a sharp, narrow lip. Occasionally the lip is rounded or, rarely, it is flattened and flush with the vessel walls. No thickened, inverted, or everted lips have been noted.

Base- Convex, sometimes conoidal; possibly flat, rarely.

Vessel shape and size- Although no complete or reconstructable vessels have been found, the sherds indicate that BEAR CREEK PLAIN vessels were characteristically simple bowls and jars with cylindrical to somewhat globular bodies and convex or conoidal bases. There is no evidence for the occurrence of carinated bowls, shouldered vessels, or other complex forms. Occasionally a flat base of sand-tempered paste is found, but the question of whether such sherds are from BEAR CREEK PLAIN vessels or from rare sand-tempered vessels with incised decorations has not been answered.

Vessel size could not be determined with complete accuracy, but the curvature of rimsherds indicates that the oral diameter of some vessels fell between 15 and 20 cm. As a rough estimate, based on sherd curvature and size, most of the vessels stood between 10 and 25 cm. high.

DECORATION: None, except for rare lip notching.

DISTRIBUTION: Walter Bell (829); Print Bell (791); Sawmill (484); Wylie Price (313); Runnells No. 2 (185); Runnells No. 1 (126); Jonas Short (100); Etolie (52); Blount (30); Sowell (27); Dubose (20); McElroy (12); Brink Powell (9).

REMARKS: Crack-lacing holes are quite common, usually drilled from the exterior of the vessel but occasionally from both sides.

At the George C. Davis Site, type site for the Alto Focus, 139 sherds of a plain sand-tempered ware were reported in association with Alto Focus Phase I (Newell and Krieger 1949:132). The Davis Site sherds were compared at first hand to those from McGee Bend, and, since they are virtually identical in paste and form, it was readily apparent that all represent the same basic ware. The sharp lip of most McGee Bend specimens was noted in the Davis Site collection, as well as convex and conoidal bases, frequent crack-lacing holes, and--judging from the sherds--comparable vessel shapes and sizes. The only readily noticeable difference is that several of the rim sherds from the Davis Site have notched lips while only one notched rim sherd (from the Print Bell Site) was found at McGee Bend. Also in the Alto Focus Phase I levels at the Davis Site were an estimated seven vessels that had sandy paste like BEAR CREEK PLAIN, but which occurred in the form of complex vessels with shoulders, everted rims, flat bases, and intricate incised and engraved designs. A few sand-tempered sherds with similar designs found at McGee Bend are not included in the BEAR CREEK PLAIN category.

There are certain similarities between BEAR CREEK PLAIN pottery of the McGee Bend area and certain types in other regions. In discussing possible affiliations of the sand-tempered pottery at the Davis Site, Newell and Krieger (1949:130) noted resemblances to MANDEVILLE PLAIN of the Tchefuncte Culture in the Lower Mississippi area and to types O'NEAL PLAIN and ALEXANDER INCISED of the Pickwick Basin area in northern Alabama. Actually, the major point of resemblance to those types lies in the abundant use of sand as a tempering agent, the vessel forms of all three being markedly different from those of BEAR CREEK PLAIN. Also, embossing, incising, pinching, and punctating occur on some or all of the three types, traits which are absent from BEAR CREEK PLAIN. The possibility that BEAR CREEK PLAIN bears some typological relationship to the MANDEVILLE PLAIN--O'NEAL PLAIN--ALEXANDER INCISED group cannot be ruled out, but certainly such a relationship, if it does exist, must reflect indirect or long-range cultural contacts.

There is one type of pottery, however, which is strikingly similar to BEAR CREEK PLAIN and which, furthermore, occupies an adjacent geographical position and apparently overlaps the temporal distribution of BEAR CREEK PLAIN. This is the GOOSE CREEK PLAIN type of the Galveston Bay Focus, described by Wheat (1953) and by Suhm, Krieger, and Jelks (1954, 378-80, Pl. 71). The Galveston Bay Focus is centered in the coastal plain southwest of McGee Bend and represents a hunting-gathering culture of the Neo-American Stage. Selected sherds of GOOSE CREEK PLAIN from Galveston Bay Focus sites duplicate the BEAR CREEK PLAIN of McGee Bend and the Davis Site in all particulars. The paste is identical in texture, in color, and in the abundant presence of quartzitic sand; the same vessel shapes, distinctive rim profiles, and base forms are present. Crack-lacing holes are likewise frequent. There are three principal differences between BEAR CREEK PLAIN and GOOSE CREEK PLAIN: (1) while GOOSE CREEK PLAIN usually is sand-tempered to greater or less degree, it also occurs with clay-lump (grog?) temper; (2) a related decorated form, GOOSE CREEK INCISED, is found at most, or all, of the Galveston Bay Focus sites. Vessel shapes and sizes of GOOSE CREEK INCISED are identical to those of GOOSE CREEK PLAIN, but the upper part of the rim bears from one to six narrow, horizontal, closely-spaced, incised lines, or, occasionally, incised patterns made up of hachured, cross-hatched, punctated, or ticked lines, or of various combinations of those decorative techniques; (3) lip notching is common in the Galveston Bay Focus, both on GOOSE CREEK PLAIN and on GOOSE CREEK INCISED vessels, but is extremely rare for BEAR CREEK PLAIN.

Wheat (1953: 194-195) has observed that there is stratigraphic evidence in sites at Addicks Reservoir to support the hypothesis that sand tempering is earlier than clay tempering in the Galveston Bay Focus. His estimated beginning date for the focus is A.D. 600 to 700, the estimate being based largely on the apparent association, in early Galveston Bay deposits at the Kobs Site, of five sherds from a single vessel identified as TCHEFUNCTE STAMPED of the Lower Mississippi area (Wheat 1953: 244 and 193).

Since sherds of GOOSE CREEK PLAIN and GOOSE CREEK INCISED have been found in protohistoric and historic sites of the Rockport Focus (a coastal complex adjoining the Galveston Bay Focus area on the west), it appears likely that the Galveston Bay Focus survived until the early historic period, perhaps until the 17th century (Wheat 1953: 244; Suhm *et al.* 1954: 130). No historic trade material, however, has been reported to date from components of the Galveston Bay Focus itself.

Both BEAR CREEK PLAIN and the GOOSE CREEK series are probably representatives of the same basic ware, a ware which may also include the plain, incised, and asphalt-decorated pottery of the Rockport Focus. Examination of collections on file at The University of Texas reveals a distribution of this basic kind of pottery extending from the vicinity of Galveston Bay inland at least as far north as Cherokee County. It occurs as far east as the Sabine River (and probably continues for some distance eastward of that stream), and, to the west, it extends to the drainage of the lower Brazos River. Chronologically a rather lengthy tenure is indicated, from Phase 1, Alto Focus--or possibly from Tchefuncte times--to the protohistoric period. The present evidence suggests that the heavily sand-tempered forms of this basic ware, including BEAR CREEK PLAIN, occupy a relatively early position in its history.

The distribution studies of the present report indicate that BEAR CREEK PLAIN is disjoined in some degree from the clay-tempered ceramics that are characteristic of the Angelina Focus. Furthermore, BEAR CREEK PLAIN is earlier than the clay-tempered Angelina Focus ceramics. Typologically, two separate ceramic traditions certainly must be represented by these two kinds of pottery: they reflect, respectively, two completely different conceptions of pottery styling and manufacture.

If the inspiration for Angelina Focus ceramics lies with Caddoan traditions, BEAR CREEK PLAIN is surely a product of the same stylistic tradition that produced the ceramics of the Galveston Bay and Rockport foci. Considering that BEAR CREEK PLAIN is distributed over approximately the same territory that was occupied by Atakapan peoples in the eighteenth century, it appears probable that BEAR CREEK PLAIN is a kind of prehistoric Atakapan pottery. Since it predates the Angelina Focus in the McGee Bend locality, there is a strong possibility that similar plain pottery found in Galveston Bay Focus sites and constituting a sand-tempered form of GOOSE CREEK PLAIN (Wheat 1953; Suhm *et al.* 1954: 128-129, 378-380, Pl. 71) is also relatively early there. If future research should prove this to be the case, then the Angelina Focus, which followed BEAR CREEK PLAIN at McGee Bend, probably equates in time with the later part of the Galveston Bay Focus when incised pottery would have been in vogue. Extending this possibility further, the tentative conclusion is unavoidable that the Galveston Bay Focus was coastal Atakapan and the Angelina Focus representative of a marginal prehistoric Hasinai group (Eyeish? Adai?) or possibly Bidai or Deadose.

In any event, the plain and decorated pottery of the Galveston Bay and Rockport foci together with BEAR CREEK PLAIN constitute a single ceramic tradition typified by simple jars and bowls with convex and conoidal bases. It appears likely that these distinctive vessel shapes derived from the convex-conoidal-based pottery that is distributed over much of the eastern United States (Griffin 1952).

But it would have been difficult for this vessel form to have diffused into southeastern Texas once the elaborately decorated ceramics of the Caddoan Area to the north and of the Lower Mississippi Area to the east became firmly established. Thus it is reasonable to conclude that the tradition reached southeastern Texas before Caddoan and Lower Mississippi area ceramics became entrenched. If that hypothesis is correct, the incised and clay-tempered pottery of the Galveston Bay Focus must have developed out of the basic sand-tempered plain ware, BEAR CREEK PLAIN, with inspiration for the incised decorations, and perhaps for clay tempering also, probably coming from Lower Mississippi and/or Caddoan area peoples.

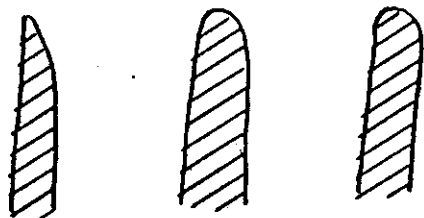
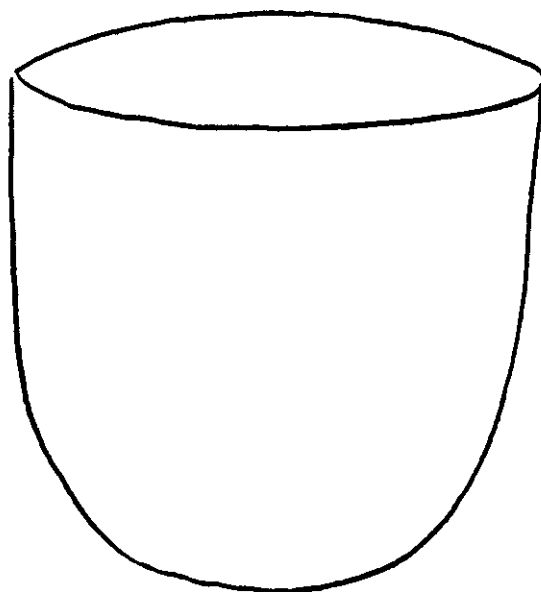
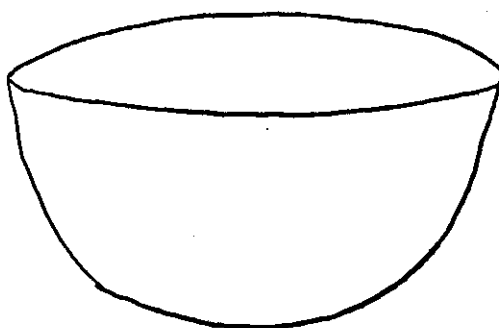
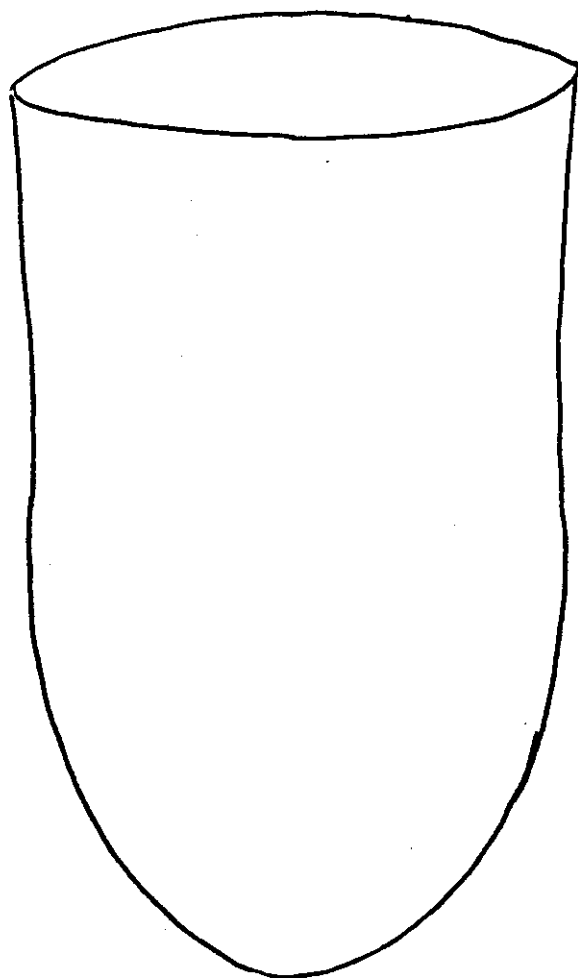
The asphalt-painted pottery of the Rockport Focus could well have grown out of the hypothetical BEAR CREEK PLAIN base, but the idea of painted decorations could hardly have been borrowed from the Caddoan or Lower Mississippi area traditions. Probably it came from the Huasteca region down the Gulf Coast in Tamaulipas or possibly it was of strictly local origin.

The hypothesis that BEAR CREEK PLAIN is a relatively early kind of pottery along the Texas coast cannot be adequately tested with present data. Intensive excavation and close dating of the different kinds of pottery in question must be achieved before the final answer can be known.

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Rims (exteriors to left)

Typical Bear Creek Plain vessel shapes (reconstructed from sherds). Largest vessel approximately 20 cm. high.

## LATE ARCHAIC-EARLY FORMATIVE RELATIONSHIPS IN SOUTH LOUISIANA

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Workers in South Louisiana have emphasized the close relationships between prehistoric habitation and changing environment. The effects of the dynamics of delta building and change on both the natural environments and man's activities have received particular emphasis (Kniffen 1936; McIntire 1958; Saucier 1962; and Gagliano 1963). In examining Late Archaic-Early Formative relationships in this paper, South Louisiana will be considered as a discrete area which was subjected to cultural influences from adjacent regions as well as developments which appear to be more or less indigenous. Even with this emphasis, it is necessary to review the geographic framework of the area in order to properly evaluate the strong influence which coastal and deltaic environments had on such things as settlement pattern and economy.

In the coastal area the distribution of habitation sites is dictated by the location of gulf and lake beach ridges and Mississippi River distributary natural levees (Fig. 1). These features provide the only firm, relatively high places suitable for even periodic occupation. It is significant that the grain of the delta is dominated by a radiating pattern of natural levee ridges with a general north-south orientation. Hence, the major routes of communication are normal to the coast. Furthermore, the distal or seaward end of each distributary levee becomes a cul de sac. This is true even today, as we find some of the most isolated and slowest changing communities in the state at the ends of these distributaries. So in a very real way the avenues for movements of peoples and ideas are strongly linked with the alluvial valley; the delta formed a barrier which at least inhibited, if not prevented, free coastal oriented movements. In contrast, areas marginal or adjacent to the delta are best suited for east-west or coastal oriented movements.

It is also useful to recognize the major physiographic areas of South Louisiana. The deltaic plain of the Mississippi River is dominated by natural levee ridges, which separate extensive interdistributary basins. Each of these basins is made up of a maze of waterways, swamps, marshes, lakes, and bays. Another major component of the Louisiana coast is a marginal basin lying east of the delta. This is essentially a large tidal estuary which also receives the drainage of a number of local streams. Downdrift and west of the delta is a marginal plain consisting of parallel beach ridges or cheniers separated by extensive coastal marshes. In contrast to the deltaic plain and its associated marginal features, the surfaces of which are in no instance more than about 4,000 years old, are the older Pleistocene terraces and uplands. Here the longest record of occupation extending well into the Lithic Stage is found.

Of the 600 or more known sites in the region quite a few fall within the time interval of interest. It is significant that even Late Archaic sites are absent from the deltaic plain, a direct reflection of the very recent geologic age of this feature. Evidence from upland sites indicates a long



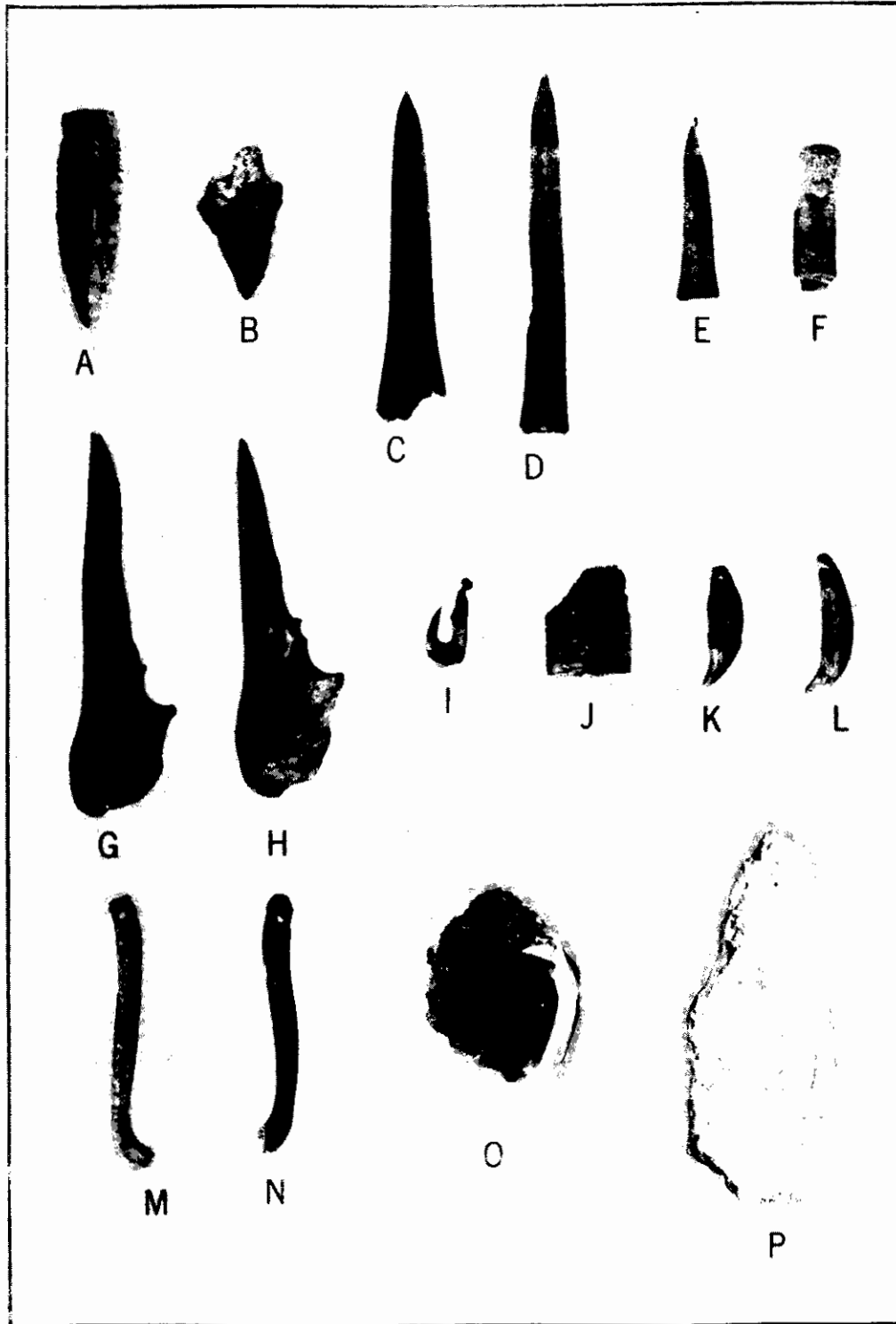


Fig. 3. Copell site artifact assemblage. A, "lanceolate-type" point; B, Gary point; C-E, bone points; E, bone atlatl hook; G, H, deer ulna awls; I, bone fish hook; J, cut turtle shell; K, perforated canine teeth; M, N, perforated otter penis bones; O, shell with asphaltum; P, shell scraper. Approximately one-third actual size.

history of occupation. Index points such as Clovis, Dalton-like San Patrice, and Kirk Serrated are found throughout these older terrace lands (Gagliano 1963). Amite River Phase sites, characterized by a distinctive assemblage of projectile points and a rather unique series of chipped tools manufactured from local stream gravels, typify Late Archaic developments in this part of the area. Bladelets struck from cores with prepared striking platforms are abundant. This technique for producing bladelets from small stream pebbles extends back to at least Paleo Indian times in the region. Although utilized bladelets are abundant, Jake-town-type perforators are absent. Many of the chipped tools seem to have been designed for woodworking; i.e., adzes, gouges, drills, and bladelets. Ground and polished stone tools more typical of Late Eastern Archaic culture are very scarce or totally absent. Sites are located most typically in stream valleys, particularly in places where gravels are abundant on point bars and in stream beds as along the Middle Amite River (Fig. 2).

Copell is the one element of Late Archaic culture from South Louisiana that has been known for some time. The type site was a cemetery located on Pecan Island, excavated by Dr. Henry Collins in 1926 (Collins 1927, 1941). The cemetery was situated on a chenier or stranded beach ridge in the marginal delta plain. It yielded more than 30 primary flexed burials accompanied by bone, shell, and a few stone artifacts. This bone and shell (Fig. 3) was exceptionally well preserved because of the sweetening effect of the predominantly shell matrix of the old gulf beach ridge on which it was located.\* The geological history of the Chenier Plain has been investigated in detail by a number of workers in the past 10 years, and it is now a well established fact that the beach ridge on which the site was located is approximately 3,500 years old. It is most probable that the beach was on the shore of a bay and not on the open gulf. In Ford and Quimby's 1945 Tchefuncte paper, Copell traits were summarized and designated as one of three separate foci. Even though it shared many traits found in other Tchefuncte sites, pottery was absent. For this reason it was suggested that Copell represented a pre-Tchefuncte manifestation. Recent data verifies this interpretation.

Another Late Archaic Phase sharing many non-ceramic traits found at Copell is represented at three oyster shell middens centered about the mouth of Pearl River along the Louisiana-Mississippi border (Gagliano, 1963). Virtually all traits represented at these sites are carried over into the Tchefuncte period as represented in the Lake Pontchartrain area. A few notable exceptions which do not continue are clay lined hearths, winged bannerstones, perforated plummet, and a few projectile point forms. Several traits of this complex should be emphasized. One is the manufacture of needle-like microflints and graters which superficially look like Jake-town perforators (Fig. 4). However, close inspection shows that the technique for producing the bladelets from which these were made was very clumsy and crude; that is, a bipolar technique was used in contrast to the prepared striking platform-type cores from which microflint bladelets were struck during Poverty Point times.

There are also a few sandy, baked clay objects from these sites. One form is biscuit, or tablet-shaped. Another type is pierced and grooved. Biconicals and other typical forms found in Tchefuncte and Poverty Point sites are conspicuously absent.

The Pearl River Phase is similar in some respects to the Elliotts Point complex of Northwest Florida (Lazrus, 1958; Fairbanks, 1959), and is definitely

ancestral to Tchefuncte in Southeastern Louisiana. Economic pursuits, settlement pattern, and most of the non-ceramic traits are clearly carried over into Tchefuncte with little or no change.

As previously reported (Gagliano & Saucier, 1963; Gagliano, 1963) at least two distinct phases of Poverty Point culture can be recognized in South Louisiana. Bayou Jasmine sites centered about Lake Pontchartrain (Fig. 5) are characterized by abundant baked clay objects, a few bone tools, an occasional steatite vessel fragment and one or two plain fiber tempered potsherds. An excellent series of five radiocarbon dates from the type site, averages 1740 B.C. It should be noted that although Poverty Point objects occur in abundance in these sites, the stone assemblage that generally comprises much of the Poverty Point trait list is virtually absent. So there is the question of what really comprises a Poverty Point site.

Bayou Jasmine Phase sites around Lake Pontchartrain are not unique in yielding abundant Poverty Point objects. A similar site is Angola Gate, located on the bluffs overlooking the Mississippi Valley at the entrance to the state penitentiary (Fig. 5). At this place some years ago Dr. Fred Kniffen of L. S. U. made a collection of Poverty Point type objects from a construction area. He collected some 70 baked clay objects, all of the grooved cylindrical variety. No other artifacts were recovered.

A more complete assemblage of Poverty Point artifacts is found in surface collections from Avery Island. Here, in addition to a few baked clay objects, stone tools typical of the period are also found. A similar situation exists at the Garcia Site in Southeastern Louisiana. At this beach deposit many Poverty Point characteristics are represented, including microflints, ground stone tools such as plummets, celts and an abundance of projectile points. One of the striking features of both the Avery Island and Garcia material is a high percentage of exotic stone in the artifact assemblage, thus indicating that these sites were participating in the Poverty Point trade net.

In addition to Copell, Ford and Quimby (1945) also recognized two other Tchefuncte manifestations. The first of these was represented by the Little Woods, Tchefuncte, and Big Oak Island shell middens centering around Lake Pontchartrain. There were also several conical earth mounds one of which was located near Lafayette, Louisiana, on the western side of the alluvial valley. Other mound sites were found at Lake Louis, Booth Landing, and Bayou Rouge. More recent work by McIntire (1958) and others has brought the total number of shell middens to about fifty. These are located in two general areas: in the Pontchartrain Basin and around Grand Lake (Fig. 6). Habitation of shell middens and a distinctive assemblage of chipped stone, shell, ground stone and bone artifacts and a few other traits differentiate the coastal sites from the Tchefuncte mounds of the alluvial valley. There is also a pronounced difference in pottery from Tchefuncte sites in the Pontchartrain Basin and those found in Southwestern Louisiana. In addition to the shell middens, Pontchartrain Tchefuncte is characterized by burials in middens, bone, shell, and stone artifacts, similar to those from the Copell and Pearl River Phase sites plus the introduction of a fully developed pottery complex (Fig. 7) including clay tempered and sand tempered wares (Ford & Quimby, 1945). Mounds have not been found in association with coastal Tchefuncte middens.

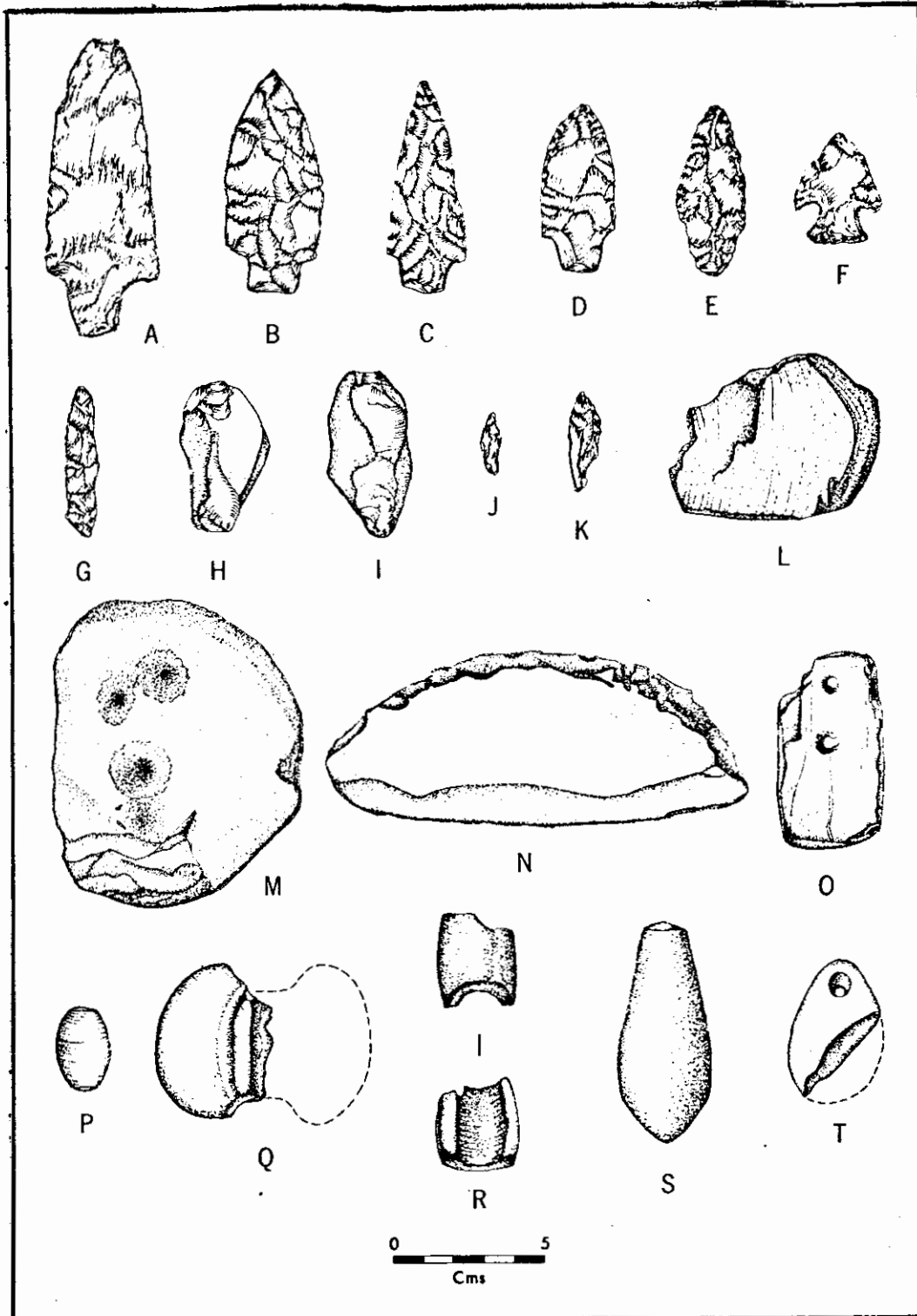


Fig. 4. Pearl River Phase artifact assemblage. A, Hale point; B,C, Macon point; D, Pontchartrain point; E, Gary point, F, Edge-wood point; G, straight drill; H,I, bipolar cores; J,K, microflints; L, shell gouge or scraper; M, "nutstone" or anvil; N, sandstone saw; O, gorget; P, undrilled bead; Q,R, atlatl weights; S,T, plummetts.

Tchefuncte mound sites are grouped on the west side of the alluvial valley and appear to be related to the Teche course of the Mississippi (Fig. 6). Earth mounds excavated by Ford and Neitzel and associates fall into this area (Ford & Quimby, 1945). Additional sites have been discovered along the Vermillion River and somewhat to the north of the Lafayette site; one is the Baker site near Cecilia, Louisiana, found by Dr. Charles Bollich. These sites also consist of one to three low conical earth mounds. Similar mounds occur in the terrace lands of Southeastern Louisiana where they are associated with Late Archaic stone tools and points. One radiocarbon date from a site on the Middle Amite River suggests that this Late Archaic development of associated mounds may have persisted until about the time of Christ, without a significant introduction of pottery.

At Avery Island a low conical mound of the same type was partially excavated. The mound showed two distinct stages of construction, with a low primary mound containing charcoal lenses, a few scattered amorphous baked clay objects, a few chert chips or flakes, but no really distinctive artifacts. No evidence of burials was disclosed. A charcoal lens from this mound yielded the surprisingly early date of 2490 B.C. The validity of this date has neither been confirmed nor rejected.

Related to the Teche Tchefuncte development is a collection of a few Poverty Point objects, and a number of small broken potsherds from canal spoil just east of Lafayette. In fact the site from which this material was recovered, designated Ruth Canal in Figure 6, was located in a Teche Mississippi meander loop which may have been active at the time of construction of the Lafayette mounds. This rather meager collection of material is unique in that 30 to 40 percent of the sherds are fiber tempered. To date, this is the most fiber tempered material that has been recovered from any site in South Louisiana. A single fiber tempered sherd was found in the Little Woods sites and a few were found at the 3,700 year old Bayou Jasmine site. This material from Ruth Canal suggests that there may yet be a fiber tempered horizon in South Louisiana, although somewhat localized. It may be concentrated along the poorly investigated Teche courses of the Mississippi (the Teche Mississippi and its distributaries). A program of study for this area has been outlined and hopefully will be undertaken in the near future.

Another Tchefuncte development of interest to this discussion is found in the group of shell middens centered about Grand Lake (Fig. 6). The type site is a large midden first investigated by Kniffen a number of years ago. He mapped the site, which was then partially destroyed. Kniffen reported that it had the configuration of an alligator. Unfortunately the site has been almost completely destroyed by erosion. Pottery from this and other nearby sites is quite distinctive and differs from Teche and Pontchartrain Tchefuncte wares (Fig. 8). A high percentage is sand tempered. It is thick, poorly made, and in some instances appears to be molded rather than coiled. One of the most characteristic decoration motifs is a simple stamping conforming to the type description of Jaketown simple stamped as described by Ford, Phillips, and Haag (1955). Other decorations include folded lips, multiple incised lines parallel to the rim, cane stamping, angular incised lines, and a few check stamped sherds which resemble Deptford stamped. Slashlike incisions also occur. The Grand Lake pottery compares favorably with material collected from a number of sites found during a survey of the Trinity River Delta in Southeastern Texas in 1955. These sandy Trinity River Delta wares have recently



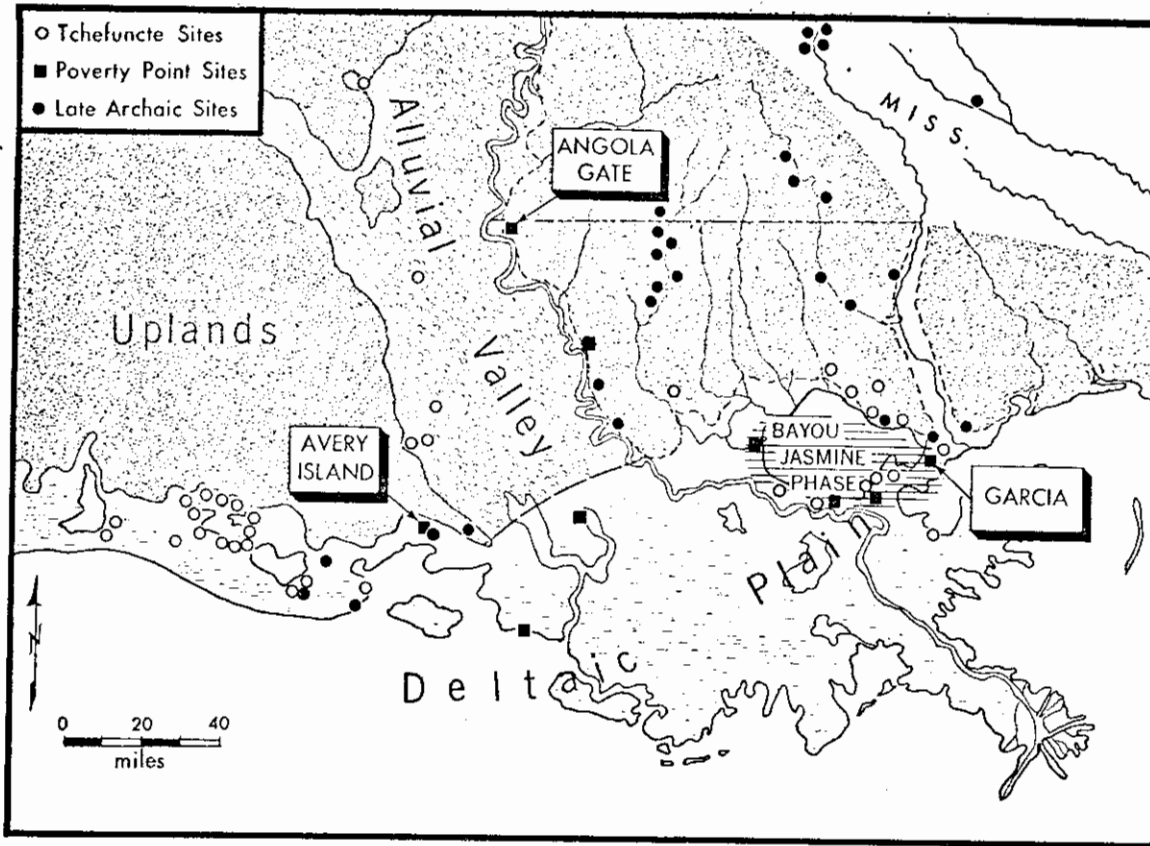


Fig. 5. Poverty Point sites and phases in South Louisiana.

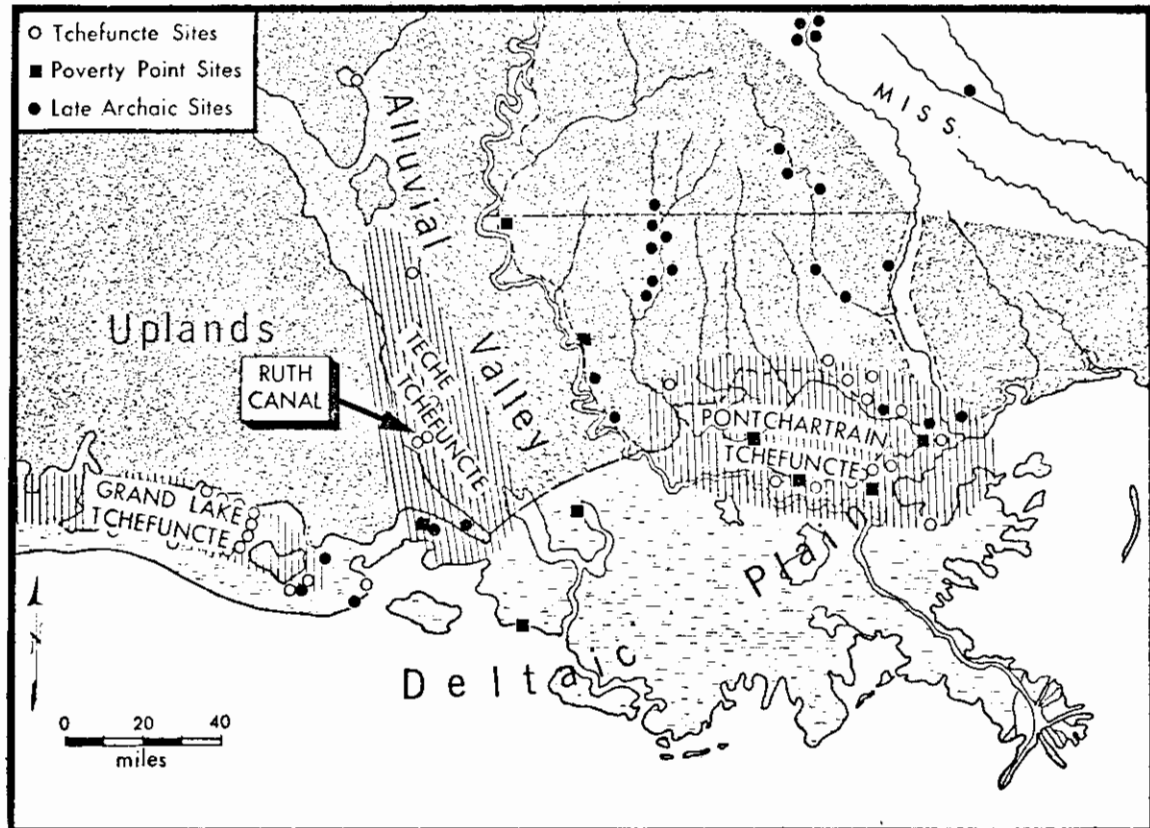


Fig. 6. Tchefuncte sites and phases in South Louisiana.

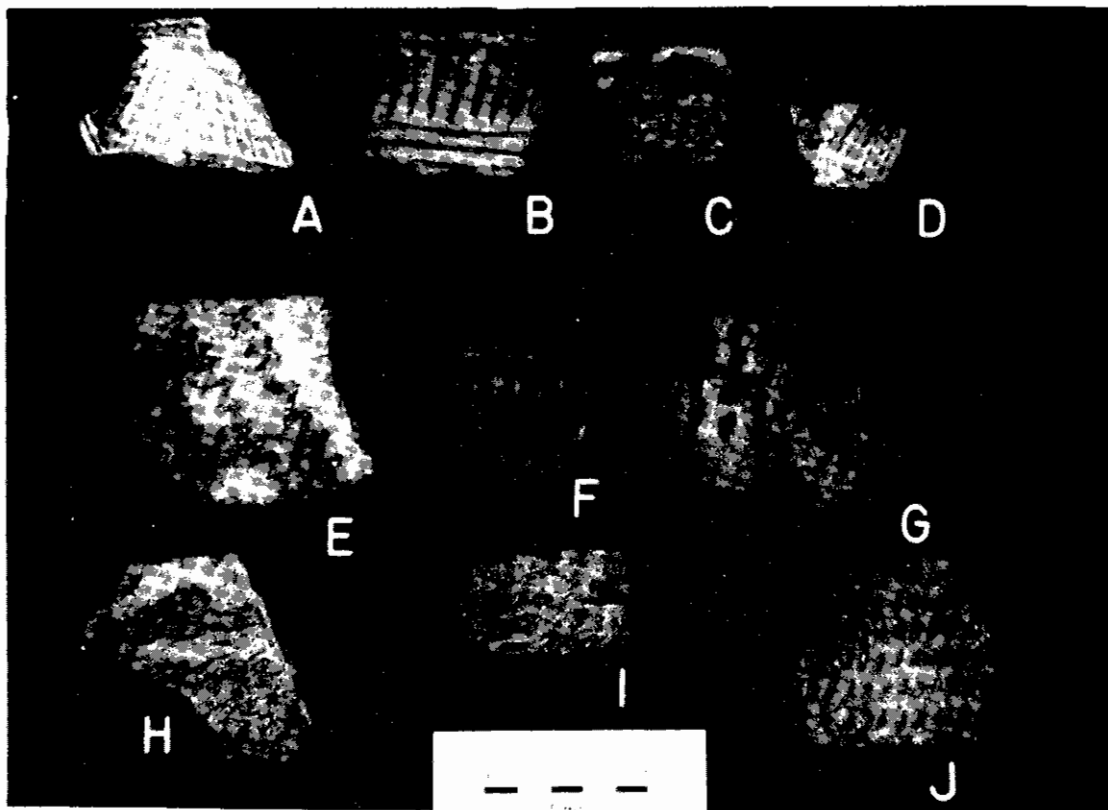


Fig. 7. Selected Pontchartrain Tchefuncte pottery types. A,B, Tchefuncte Incised; C,D, Lake Borgne Incised; E, Tchefuncte Stamped; F,G, Tammany Pinched; H, Chinchuba Brushed; I, "Fingernail Gouged", J, "Punctated Type."

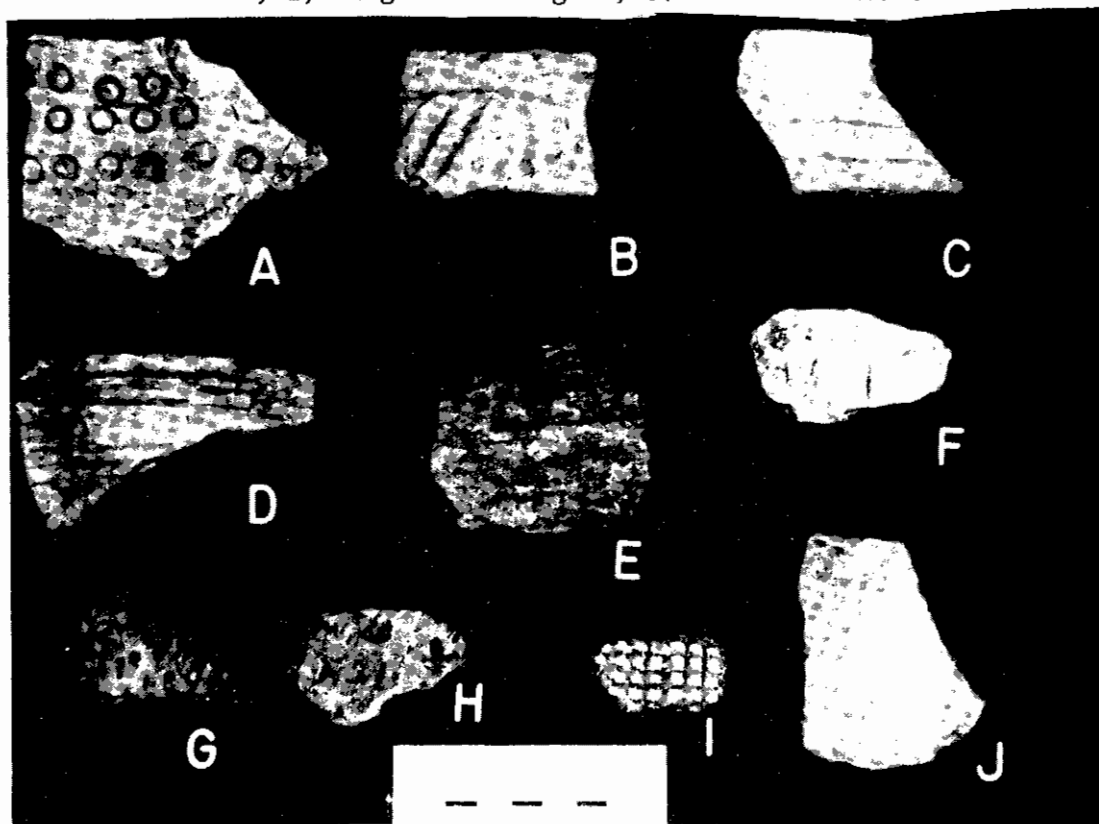


Fig. 8. Grand Lake Tchefuncte pottery assemblage. A, "Cane Stamped"; B-D, Tchefuncte Incised; E,F, Jaketown Simple Stamped; G,H, Tammany Pinched; I,J, Deptford Stamped.

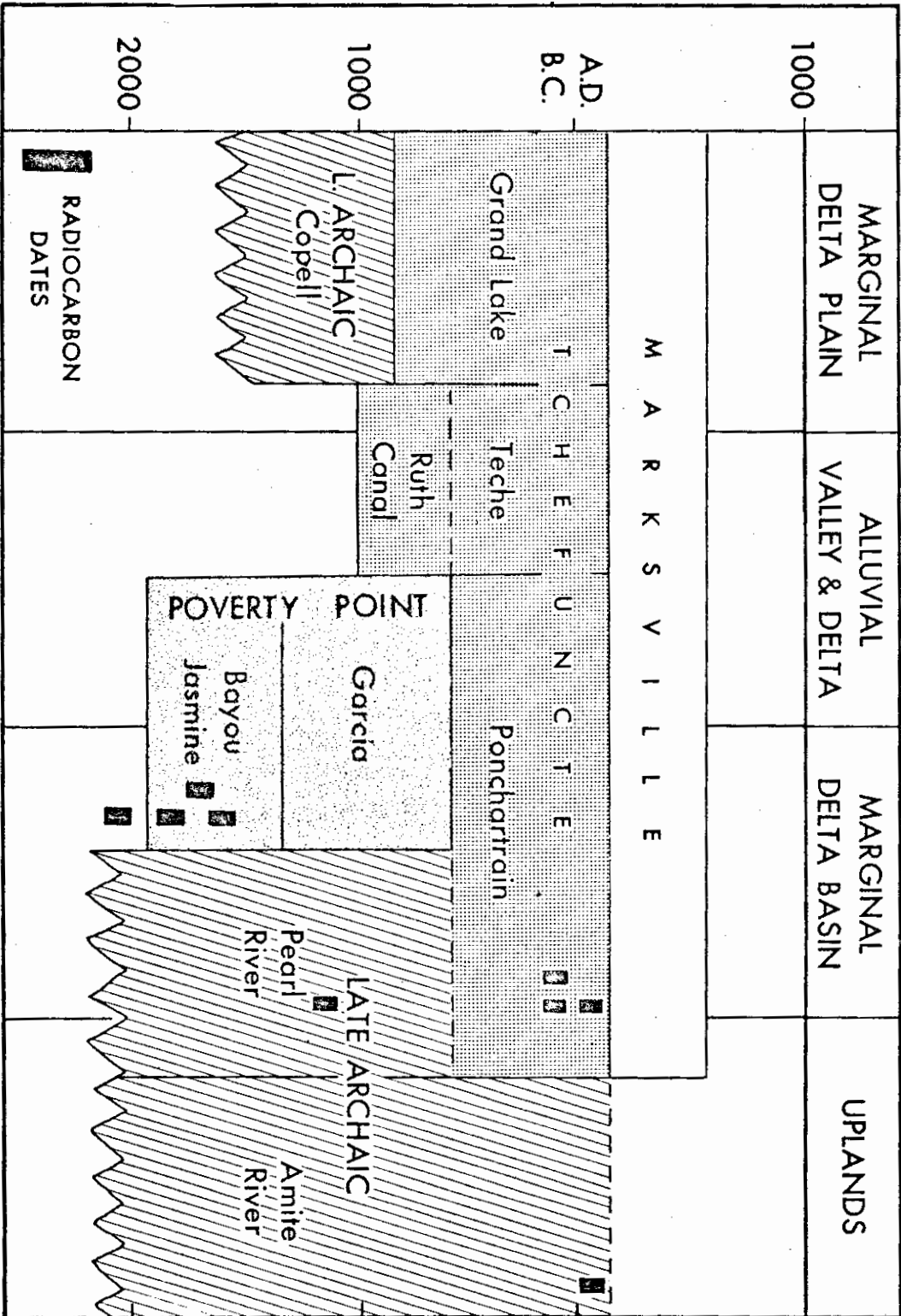


Fig. 9. Comparative chronology chart.

been described by Shafer (1966). Most of the pottery is plain, but there are a few simple stamped sherds in the L. S. U. collections. It appears then that this sand tempered series of pottery moved into the marginal delta plain and ultimately reached the Galveston Bay area of East Texas. It is also interesting that the sand tempering tradition persisted until late prehistoric times. Marksville, Coles Creek, and Plaquemine motifs on sand tempered sherds were recently found by Mrs. Simmons in south central Louisiana. Mr. Jon Gibson has found similar Tchefuncte-like material in the Little River area.

In summary, the uplands and terrace lands on both sides of the Mississippi Valley have a long tradition of Lithic and Archaic Stage occupations. These areas were culturally stagnant and the Archaic tradition persisted until relatively recent times. Not until Coles Creek and Plaquemine times do we see evidence of Pottery-making peoples in these places. As mentioned previously, the Amite River Phase typifies Late Archaic culture in the uplands. In contrast to the general scarcity, or total absence, of ground and polished tools, pebble-like tools make up an important part of the assemblage. There are similarities to the pebble tools showing up in Alabama. This Archaic development seems to be found throughout the hill and terrace areas of the Gulf Coastal Plain of Texas, Louisiana, Mississippi, Alabama, and Florida. The possibility of Early Lithic roots should be further investigated.

In the coastal area in Late Archaic times characteristic developments include the Copell site and Pearl River Phase sites (Fig. 9). The Pearl River Phase exhibits strong "Eastern Archaic" affinities as suggested by arrows in Figure 10. Sites are associated with bays and estuaries and there was intensive utilization of shellfish and other foods of the coastal environments, plus a very particular knowledge of the raw materials (stone) from the nearby uplands. Some trade materials such as Arkansas novaculite and Catahoula sandstone show up in the sites, but the bulk of the stone is from nearby sources. Absence of burials in Pearl River Phase middens, coupled with evidence from the Copell cemetery suggest that burials away from habitation sites may have been practiced in the Louisiana coastal Archaic.

Of particular interest to the interpretations here is the fact that settlement pattern and artifact assemblage, exclusive of pottery, were carried over almost completely into the Tchefuncte culture, as developed in the Pontchartrain sites. That is, the only difference between Pearl River Phase and Pontchartrain Tchefuncte is the introduction of a rather complete ceramic complex. There appears to be no evidence of a major break, or even a significant intrusion of Poverty Point traits separating Pearl River Phase and Pontchartrain Tchefuncte. From this standpoint the Garcia site on the eastern end of Lake Pontchartrain remains an enigma. It seems to have existed side-by-side with Pearl River Phase sites only a few miles away.

Poverty Point type baked clay objects appear at a rather early time interval as an important part of the artifact complex of lower valley and delta dwelling peoples. This would most appropriately be called a Late Archaic development with Poverty Point type objects. These have been well documented in the Bayou Jasmine Phase by a series of radiocarbon dates and a rather extensive collection of material. Again, it is interesting to note that a few fiber tempered potsherds have turned up in conjunction with these baked clay objects. The exclusive occurrence of the cylindrical grooved type at Angola Gate is also significant.

Fiber tempered pottery from Ruth Canal may be somewhat earlier than suggested in Figure 9. However, this is purely conjecture. It seems likely that additional fiber tempered pottery sites will be found in south central Louisiana, most probably in association with the early stages of the Teche Delta. These may be difficult to locate as much of this data system has been buried by alluvium.

The Grand Lake Tchefuncte series suggests another intrusion into the area (Fig. 10). The pottery in part conforms nicely to Tchula pottery described from Jaketown; Jon Gibson's Tchula material from the Little River area strengthens the interpretation that it may have arrived down the valley rather than along the coast. However, Alexander pottery from Pontchartrain Tchefuncte sites and Deptfort-like Check stamped sherds suggest possible affinities with the eastern gulf area.

This background provides the worker in South Louisiana with a very special view of the Poverty Point culture as it has been described from the type site (Ford & Webb, 1956). Obviously South Louisiana was receiving some feedback from Poverty Point, but at the same time there are also many elements indigenous to the coastal area which have contributed to the Poverty Point trait list. For example:

1. A full variety of Poverty Point objects was developed considerably before Poverty Point times in the delta and alluvial valley.
2. Many of the chipped artifacts such as adzes, choppers, drills, bladelets, etc., are found in upland Archaic sites.
3. Poverty Point type cores and bladelets have a long history in the upland Archaic.
4. Ground and polished tools and artifacts such as steatite vessels, celts, plummets, gorgets, and even red jasper beads are found in Pearl River Phase sites, not to mention Late Archaic sites throughout the Southeast.
5. The Poverty Point projectile assemblage contains a rather complete inventory of Late Archaic projectile points.
6. It is quite apparent that many of the artifacts were brought in as finished pieces, such as Motley and Delhi points of blue gray chert, Ponchartrain points of tan gravel from Southeastern Louisiana, and certain orthoquartzite points from the Mobile Bay area.
7. The Poverty Point trade system was drawing from sources that had already been well established during the Archaic. In fact there is considerable evidence of widespread trade before Poverty Point times.

If this list of Archaic traits is subtracted from the Poverty Point list, what remains?

1. Planned earthworks and mounds. There may be a precedent for at least the trait of mound building, possibly not for the organization factor that is implied by the earthworks.

2. Effigy heads, beads, motifs, etc.
3. Microflints -- specifically perforator types. These may have developed in the coastal Archaic sites.

Archaic peoples were probably highly mobile with the custom of annual round. Could not the Poverty Point site represent an Archaic climax where peoples from surrounding regions met during one season of the year for festivities, religious rites, trading, etc.? It need not have been inhabited throughout the year. All that is needed then is the motivation for such a meeting.

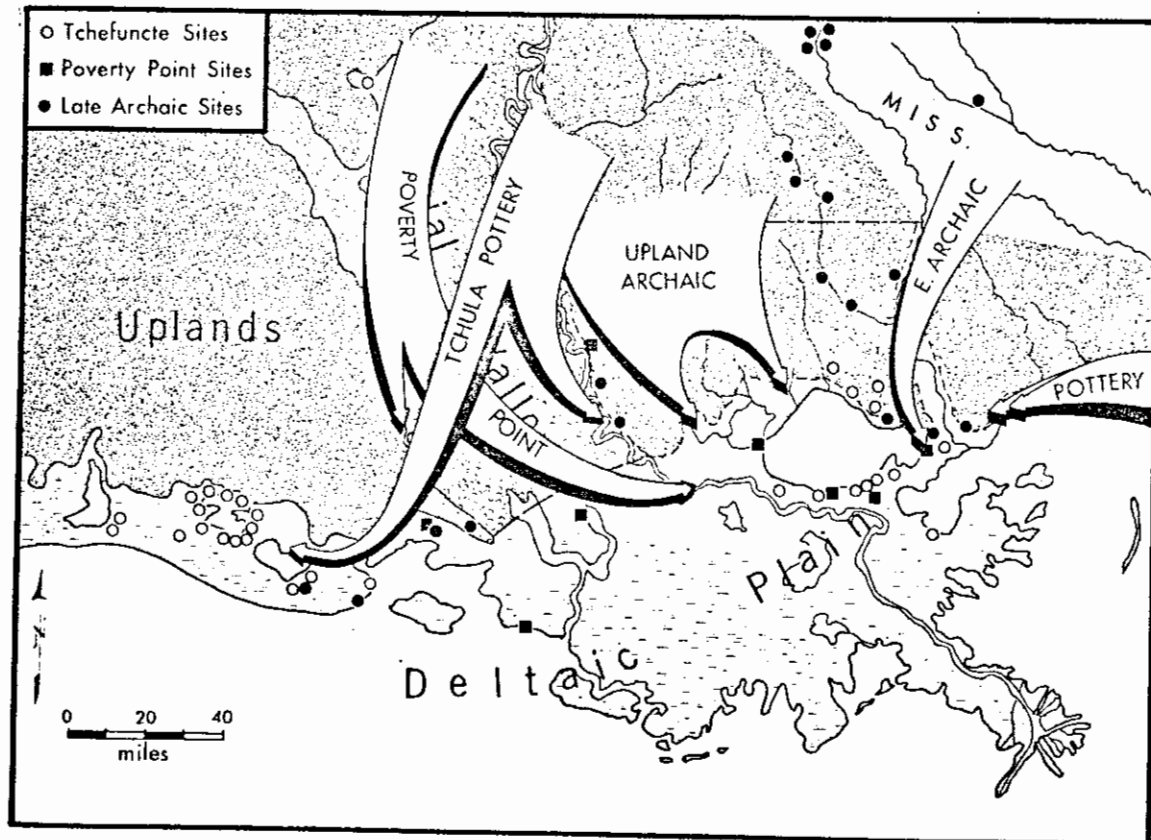


Fig. 10. Conjectured Late Archaic-Early Formative influences.

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## THE MOBILE BAY CHRONOLOGY

E. Bruce Trickey and N. H. Holmes

The object of this exercise is to recapture the essence of the report on the Mobile Bay Chronology presented at Avery Island in November, 1966. This is being resurrected a year later from a set of cold notes and with a printer's deadline at hand. Therefore, we earnestly solicit the reader's tolerance. The material covered here is being prepared for publication elsewhere in a more complete and orderly form.

The first chronology for our area was delineated by Bruce Trickey and published in 1958. Subsequent investigations of new sites now allow us to tidy up the original and to extend it into earlier times. Foremost among the new sites are those at Bryant's Landing on Tensaw Lake. This is some 30 miles north of Mobile on the east side of the delta.

At Bryant's Landing two sites have been excavated. Both consist of layers of *rangia* shell separated by layers of mud. Minor intermixing has taken place but generally speaking the layers of shell denote periods of occupation and the layers of mud denote periods between occupations.

With information obtained from Bryant's Landing and from a few other sites in the area we have revised the chronology. The new arrangement is shown on the accompanying drawing.

### Paleo:

At present no fluted points have been reported from this region. Quite probably the makers of such items visited our coastline about the same time that they worked the areas further North. However, the water level has changed many times in the past 10 to 20 thousand years and we feel that sites dating from this period are now well out in the Gulf of Mexico, or covered by many feet of alluvial soil in the Mobile Bay delta. If sites of this type are found we expect them to be in the uplands to the east and west of the Bay. No systematic search has been made in these places.

### Transitional:

Scattered finds of Dalton, Hardway, and Big Sandy points have turned up. When found they are well away from the coast and the river system, often on hills above the tributary creeks. All have been surface finds. We have placed them at the same time as they occur at the Stanfield-Worley site in North Alabama. We have no proof of this but it seems likely.



Early Archaic:

The greatest gap in our chronology occurs between the Dalton era and the ceramic horizon. It is not that we lack material. We have a wide variety of points, scrapers, bi-faced knives, "turtle backs" and crude tools. Often these are found on sites at which no pottery occurs. As yet however, we have no stratigraphic sites, or sites that can be dated.

Late Archaic:

Right or wrong we are placing our polished stone material in this niche. We are not unaware of the fact that it may belong later in one of the ceramic periods. But it does exist--atlatl weights, drilled pebble pendants, drilled stone triangles, drilled stone turtles, Gary points. What we term shell mound archaic on our drawing may or may not correspond with the same phase in North Alabama. Here we have a shell layer, without artifacts, at the bottom of the stratigraphic site at Bryant's Landing and dating about 2200 B.C.

Poverty Point:

We have been gently criticized by our friend Dr. Clarence Webb, the Prophet of Poverty Point, for using this term. Perhaps he is right. What we have is a fired clayball culture that shows up just above the Shell Mound Archaic layer in the stratigraphy at Bryant's Landing. No date was obtained on this layer but we feel our placement of it at about 1600 B.C. is valid. The clay balls do not assume any of the well defined shapes described and illustrated in the Poverty Point report. Hence Dr. Webb's questioning of our use of the term. At Bryant's Landing no other artifacts definitely occur with this material. At another site the clay balls occur with both polished stoneware and with later period pottery. Possibly this practice started earlier and lasted longer than is indicated on our drawing.

Fiber Tempered:

Fiber tempered ware occurs just about the clay ball layer at Bryant's Landing. A few sherds extend down into the mixture of clay balls and shells, but most are in a heavy mud layer above the clay balls. For this reason, and because many fiber tempered sites exist where clay balls do not exist, we feel that this is a separate group. None of our fiber tempered from any of our sites is decorated. As yet we have no indication of vessel shape, though we have a few plain rim sherds and one sherd with a lug slightly below the rim. "Fiber tempered" is where it is in our chronology because of its location in the Bryant's Landing stratigraphy, and because of a dated site from the Fort Walton area, some 60 miles east of Mobile Bay.

Bayou La Batre:

The Bayou La Batre series seems to be unique to our area. We know of no site to east or west of us where it exists. It extends from the coast line up the Alabama and Tombigbee River systems some 60 to 70 miles. It is characterized by coarse sand-gravel tempering, tripodal and tetrapodal bases, scallop shell impressions and scallop shell rocker stamping. The rocker stamping is hard to recognize as such as it is done with sections of scallop shells containing only 4 or 5 crenulations. The resulting gouges look like drag and jab until you try to reproduce them. A layer of Rangia shell with Bayou La Batre sherds intermixed was found at Bryant's Landing. Radiocarbon dates on the shell place this culture at about 1100 B.C.

Hopewellian:

At Bryant's Landing a shell layer bearing Hopewellian ware was dated at 79 B.C. Many other sites have produced rocker stamped and broad-line incised material, but no other date is available. Several steep conical mounds exist but none has been investigated.

Weeden Island I and II:

Though we have many Weeden Island sites around the Bay we have not obtained any dates. It is placed in our chronology by Trickey's early work with seriation and by dates obtained from the Fort Walton area.

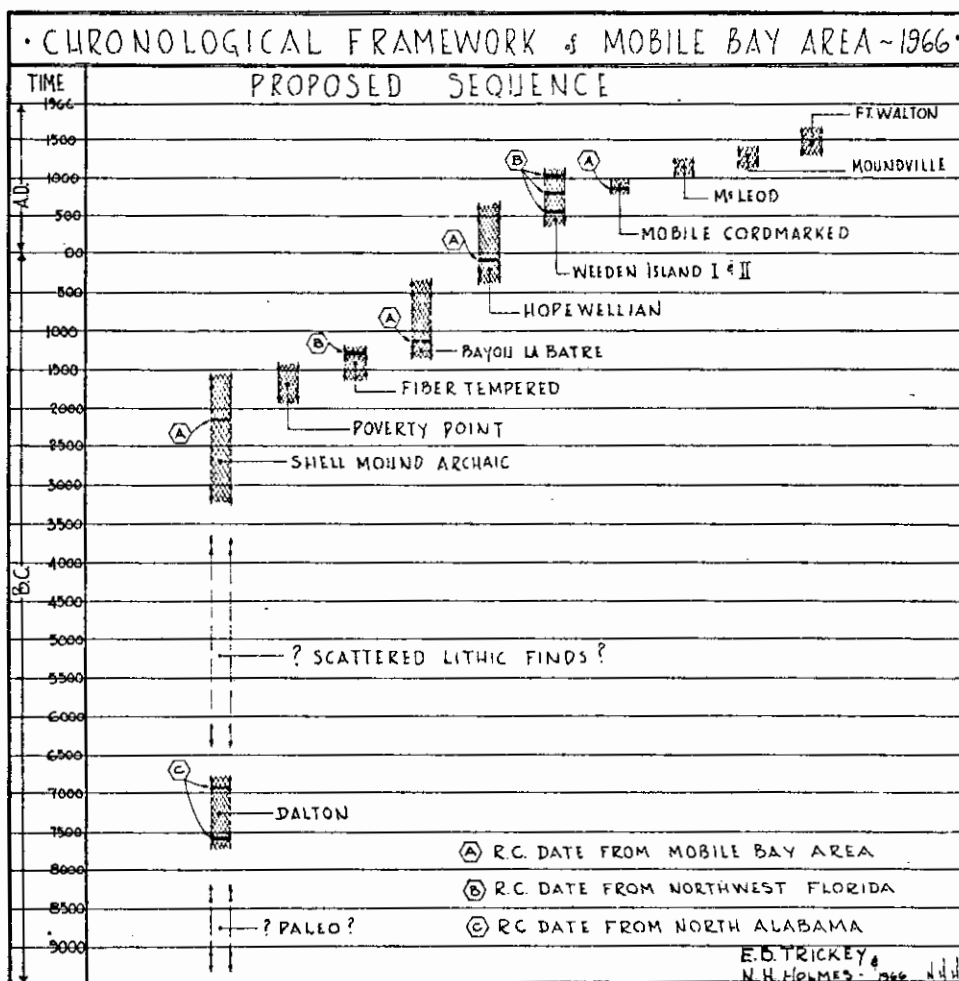
Mobile Cord Marked:

Cord marked ware has turned up on many local sites but it normally occurs as a minor element, and previously we had always linked it with West Florida Cord Marked and placed it on the Hopewellian level. At Bryant's Landing however, we have a layer above Hopewellian that is predominately cord marked and dates from about 900 A.D. This seems quite late to us but possibly it represents the last phase of the cord marked invasion. If this tradition did indeed come from the north we would probably be quite late in getting it.

McLeod:

Our placement of the McLeod series has been questioned by Wimberly, who places it much earlier. We have nothing new on this material since the 1958 chronology. Hopefully additional work will take place soon and McLeod can be fitted into its proper position once and for all. We don't really care where it goes but it is disturbing to have it wandering around.

Moundville, Ft. Walton, and contact period sites are common around our Bay and have been commented on and documented elsewhere. No recent work has been completed on these periods. At this time, however, the 1720 French fortification, Ft. Conde', is being excavated and hopefully additional information will come to light on contact period ceramics.



## THE CULTURE SEQUENCE AT THE GREENHOUSE SITE, LOUISIANA

John Belmont  
Pitzer College

In 1938 and 1939 the Greenhouse site at the mouth of the Red River near Marksville, Louisiana was dug under the general direction of James Ford. In 1951 Ford published a report on the dig, dividing the ceramics into "Troyville", "Coles Creek" and "Plaquemine" types, but nowhere closely defining these periods. Plaquemine was later defined by Quimby on the basis of an assemblage quite different from anything at Greenhouse, but the characteristics of the other two periods have never been made clear. Indeed, one gets the impression that the distinctions between the two are insignificant, and the dividing line between them quite arbitrary.

Since then Ford has kindly permitted me to restudy the data. Because of his somewhat coarse typology, and because in his analysis units he grouped his arbitrary levels by depth below surface rather than by stratum, Ford emerged with a picture of smooth continuity, with only gradual percentage changes of pottery types during the occupation, and, aside from house shape, no change in architecture or site layout. By using carefully defined stratigraphic analysis units, and a type-variety pottery classification, I have come up with a much more complex picture. Although Ford's assumption of a basically native development with only occasional influences from outside the Valley, and his ideas on the order of introduction of pottery types are generally confirmed, I find that the sequence can be broken down into phases based on more or less radical and sudden shifts in both ceramics and site layout. Some but not all of these shifts can be attributed to short-range population movements.

The accompanying chart presents the phases at Greenhouse with the old periods and cultures, as redefined by recent work, correlated on the left. The line between the Troyville and Coles Creek periods comes at a dramatic ceramic shift, whereas the line between Coles Creek and Plaquemine is marked more by an architectural shift. The three cultures involved, Marksville, Baytown, and Coles Creek are divided by abrupt discontinuities in most phases of material culture. Double lines between phases indicate particularly sharp breaks, marked by introductions of abandonments of major pottery types or styles. Single lines indicate more gradual transitions. The right side of the chart lists some of the major traits of the various phases.

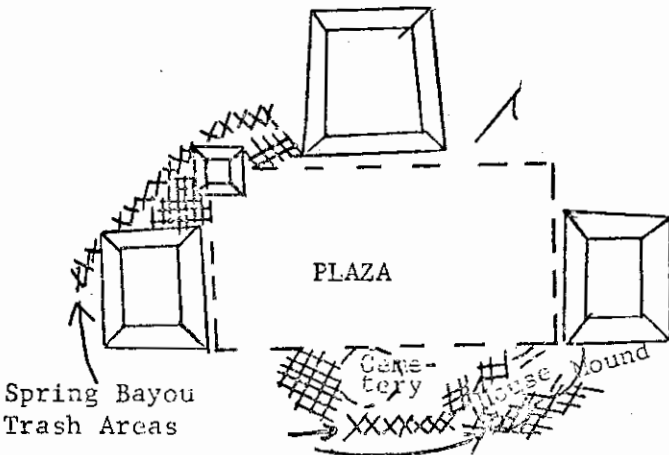

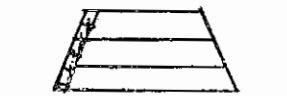
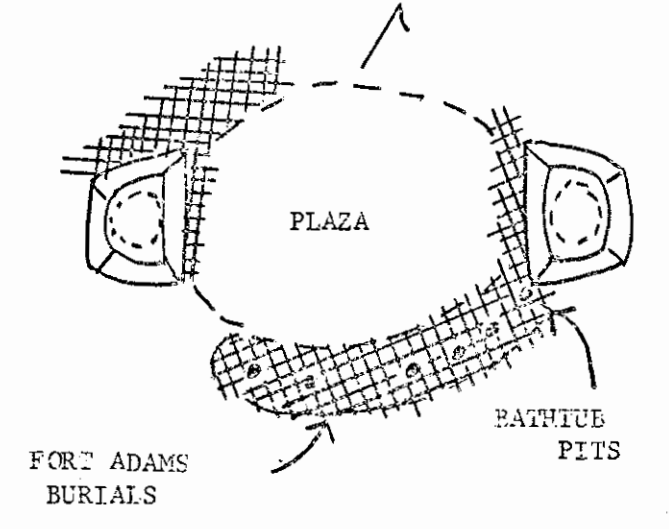
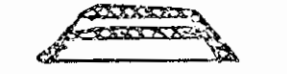
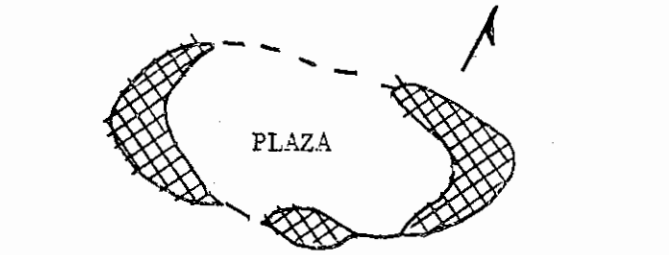

The first occupation at Greenhouse, the Black River Phase, is considerably different from the previous occupation in the Marksville area, a variant of Issaquena well represented at the Baptiste site nearby. The technique of zoned rocker stamping ("Manry Stamped") is dropped, and cord-marking, red slipping, red on buff painting, and even red-white-black polychrome are newly introduced. A new straight-line incised type ALLIGATOR INCISED is foreshadowed only by a minor variant in Issaquena times. There is a fair amount of carry-over from Issaquena with plain rocker stamping TROYVILLE STAMPED and zoned punctating (Churupa) persisting.

The techniques of cord-marking and red-painting point strongly to the Yazoo area, where both are common in Marksville times, and where they are a prominent part of the intrusive Deasonville complex which follows Issaquena culture there. A

## P H A S E   S E Q U E N C E   A T

CULTURES	PERIODS	PHASES AT GREENHOUSE	POTTERY TYPES	
COLES CREEK	PLAQUEMINE 1200 A.D.	MIDDLE NO OCCUPATION	NONE PRESENT	
		MAYES COMPLEX	PLAQUEMINE BRUSHED MANCHAC INCISED	
	EARLY	SPRING BAYOU	CHEVALIER STAMPED, <u>Var. Gorum</u> COLES CREEK INCISED, <u>Var. Mott</u> COLES CREEK INCISED, <u>Var. Hardy</u>	
		LATE GREENHOUSE	COLES CREEK INCISED, <u>Var. Mott</u> SICILY ISLAND INCISED, <u>Var. McNutt</u> GREENHOUSE INCISED PONTCHARTRAIN CHECK STAMPED	
	COLES CREEK	MIDDLE BORDELON	COLES CREEK INCISED, <u>Var. Coles Creek</u> and GRAND LAKE TYPES	
		EARLY	GRAND LAKE	FRENCH FORK INCISED and FORT ADAMS TYPES
			FORT ADAMS	MAZIQUE INCISED SICILY ISLAND INCISED CHEVALIER STAMPED
	BAYTOWN	TROYVILLE 300 A.D.	BLACK RIVER	MULBERRY CREEK CORN-MARKED LARTO RED FILMED LONDON RED-ON-BUFF MARKSVILLE INCISED CHURUPA PUNCTATED TROYVILLE STAMPED
	MARKSVILLE	ISSAQUENA		

THE GREENHOUSE SITE <sup>29</sup>

BURIALS	SITE PLAN (cross-hatching indicates midden)	ARCHITECTURE
NONE	SHERD AREA ONLY	NONE KNOWN
BURIAL IN CEMETERY		RECTANGULAR HOUSES, MOUND MANTLES 
BURIAL IN CEMETERY		ROUND HOUSES MOUND CAPS 
MOUND-TOP BURIALS NO DOGS		CLAY CAPS ON MIDDEN AREAS NO BATHTUB PITS
MOUND-TOP BURIALS		FIRST MAJOR MOUND CONSTRUCTION 
EXTENDED BURIAL IN MIDDEN WITH DOGS		BATHTUB PITS
SECONDARY BURIAL IN MIDDEN		CLAY FILLS IN MIDDENS 
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few other Deasonville types, such as OXBOW INCISED and HOLLYKNOWE RIDGE PINCHED, are present in tiny quantities at the beginning of Black River, but seem not to be fully accepted here. Whether the evidence points to an actual movement of people (Issaquena refugees?) moving to Greenhouse from the north is uncertain.

The site plan in this phase consists of a long oval plaza, its long axis northeast-southwest, with crescent-shaped middens at each end, and another midden in the middle of the southeast side. These midden areas actually consist of alternating layers and patches of midden and clay fill. They cannot be called true mounds since they are amorphous in outline and are built in low places on the site so that at their highest they are little more than a foot or so above the general site level. Similar middens are characteristic of Issaquena sites. Black River burials are in the midden and seem to be all secondary or bundle burials, without grave goods.

The Black River site plan, which is found on other contemporaneous sites, is basically an oval ring of occupied area including midden, burials and sometimes flat-topped mounds, with no signs of occupation either inside or outside the ring. This contrasts sharply with the Marksville plan wherein a geometric earthwork encloses conical and flat mounds as well as midden areas, with more house sites outside the embankment. The Issaquena Phase seems transitional, as a Marksville-like pattern is found on some sites (e.g. Leist and Thompson) and the later type on others (e.g. Manny). Conical burial mounds do not seem to survive into Black River. The question of the continuity of platform mound building in the Lower Valley from Marksville times on is unresolved, though there is evidently a break in the Marksville locality at least.

In any case the Issaquena-Black River transition is a time of highly accelerated culture change and this seems the most natural and accurate point at which to divide Marksville and Baytown cultures. The evidence for cultural and social continuity between the two phases is outweighed by the evidence for disruption of tradition, both in ceramics and moundbuilding.

During the Black River Phase there is some typological change. Incising gradually changes from the "u-shaped" Marksville line to a sharp wet line more typical of Deasonville and Coles Creek. Zoned rocker stamping gets progressively sloppier; on the other hand, a new style of zoned fine-line incising or hatching emerges which bears a very strong resemblance to an early variant of WEEDEN ISLAND INCISED. This is not to say that there is Floridian influence, rather that both the Lower Red and the Northwest Coast are in the same style area at this time, with ceramic ideas being shared and evolution proceeding in the same general direction.

The ceramic break between Black River and Fort Adams is at least as sharp as the Issaquena-Black River one, and is more easily explained as a product of foreign intrusion. Most of the Troyville types are abandoned and the early Coles Creek ones introduced at this point in time. Cord-marking and all but a single specialized variant of red painting disappear. Zoned rocker stamping also goes, and there is a radical stylistic shift in the use of zoned incising and punctating. Designs are in the main confined to cylindrical neck areas, not covering most of the body as before. Rim modes are different and there is a distinct change in ware from comparatively hard and thin to very thick and coarse. Incising is very wet and is frequently punctate-incised or stag-and-drag, a technique entirely missing in the previous phase.

The two most prominent types are MAZIQUE INCISED and SICILY ISLAND INCISED. This latter is a new type previously included under FRENCH FORK INCISED, but characterized by much simpler, standardized and geometric designs, being confined to the neck area, and lacking the "negative" style of French Fork. Also present are CHEVALIER STAMPED and EVANSVILLE PUNCTATED, and small amounts of French Fork, a type which, much more than Sicily Island, shows continuity with Marksville and parallels with Weeden Island. COLES CREEK INCISED is completely absent.

The Fort Adams phase is not represented at all to the north. There in the Tensas the contemporary Marsden phase is a much more likely descendent of Black River. The similarities shown by Fort Adams are of the broad and vague sort which implies a common cultural tradition but not direct descent. My guess is that the new population came from nearby to the south - perhaps the Baton Rouge area or Lake Pontchartrain.

In site layout Fort Adams is superficially little different from Black River. The same midden ridges, by now the highest and most desirable land on the site, serve as house locations. Nevertheless, there is no more construction of clay fills, and a part of the midden area on the south side is converted into a cemetery. The burials are different from before, being extended or semi-flexed, and often accompanied by a dog. Moreover, inconclusive evidence suggests a start at mound construction. A characteristic of this phase and the next, though perhaps originating at the end of Black River, is the construction of Ford's "bathtub-shaped fire pits", huge deep clay-lined pits evidently used for cooking over extended periods of time.

By the succeeding Grand Lake Phase the site had completed its transition to what seems to be the standard early Coles Creek layout. At each end of the oval plaza was built a low platform mound, with the longest side facing the plaza. The back side was shorter, making the mound trapezoidal. The top surface may have been rounded, or D-shaped, and had a round structure upon it. Burials were made in the mound top, and the cemetery in the midden was discontinued. As time went on more stages were added to the mound. These were not mantles, but flat caps of clay which did not overlap the sides of previous stages. Thus the dimensions of the mound in plan were set by the first stage, and as the mound grew taller its top surface grew smaller.

Along the southeast side of the site, extending like an arm from the northeast mound most of the way to the southwest one was a midden ridge containing "bathtub pits" at regular intervals. This arm bordered an old Mississippi Channel which was presumably a lake or slough at this time, and was the major living area of the site. Bankline middens are a common feature of early Coles Creek sites. A much shorter arm without bathtub pits extended north from the southwest mound.

This site layout and mound type differ in innumerable details from the Mississippian or Plaquemine norms and possesses none of the features that suggest Mexican influence on the later sites. I propose that these Coles Creek sites be excluded from the term "temple mound tradition", and be seen as on the one hand as an ancestor to this tradition, and on the other as the



continuation of an earlier platform-mound tradition which seems to have existed in late Hopewell and Swift Creek, and locally in Marksville-Issaquena.

Ceramically the Grand Lake phase shows only minor percentage and stylistic shifts from the Fort Adams phase, and the border between the two is placed arbitrarily at the date of construction of the first major stage on the northeast mound. The main developments in this phase are the emergence of French Fork as a dominant type, and the introduction of small amounts of an early variant of COLES CREEK INCISED, as well as a few sherds of MULBERRY CREEK CORD-MARKED, variety Smith Creek. Both these types are characteristic of the contemporaneous Sundown Phase, in the Tensas area to the north. At the same time ceramic contacts with the Florida Northwest Coast seem to cease from this time on, and there is increasing stylistic divergence from Weeden Island culture.

The succeeding Bordelon Phase is also an arbitrary division of what is essentially a continuum. Its beginning is marked architecturally and stratigraphically by the building of thin clay caps over certain portions of the midden area to serve as house foundations, and by the covering up and abandoning of the "bathtub pits". By this time, if not before, dog burial was abandoned. Dogs are the only exception to an unrelieved lack of grave goods in Coles Creek culture, a trait which sets it off sharply from both Marksville-Hopewell, and Caddoan-Mississippian traditions.

Aside from certain shape changes, the major ceramic event is the increased popularity of COLES CREEK INCISED, which by the end of the phase is the most popular type. The minor types RHINEHARDT PUNCTATED and BELDEAU and DUPREE INCISED, variants of the use of punctates and straight lines, become well established in the latter part of this phase. These types, especially Rhinehardt, seem to be at home on the Louisiana Gulf Coast, and may reflect increasing contact with that area. This is the period when somewhat divergent developments in the Tensas and Lower Red merge to create the classic Coles Creek ceramic complex, which thereupon spreads north up to Yazoo City and the borders of Arkansas. Some of the ceramics at the Crenshaw site in the Caddoan area of southwest Arkansas are so close to late Bordelon phase that they must represent either direct trade or colonization.

The half millenium between the start of Fort Adams and the end of Bordelon shows the sort of culture change postulated by Ford for the whole sequence -- gradual, at a steady pace, with traits generally coming and going individually, not in clusters. Now, however, there seems to be another cultural revolution, ushering in the Greenhouse Phase. There is a sharp break both in ceramics and in site layout from the previous phase, but in this case we cannot appeal to invasion, since there is no other phase which represents a more likely descendent from Bordelon, nor is there a likely ancestor for Greenhouse in other areas. Much of the change can be explained by influence from the Yazoo and Gulf Coast areas on the fringes of Coles Creek culture. This influence is part of a two-way exchange of ideas between center and periphery leading to both standardization and expansion of Coles Creek culture. Other shifts can only be attributed to a radical change in fashion whose root is indeterminable. From the coast come the small amounts of PONTCHARTRAIN CHECK STAMPED, a new type called BAYOU CUTLER INCISED, and certain distinctive rim modes. From the Yazoo may come GREENHOUSE INCISED, as well as the shift in COLES CREEK INCISED from a few wide-spaced overhanging lines (var. Coles Creek) to many close-spaced lines incised at an angle but not really overhanging

(var. Mott). The presence of a new fine thin highly polished ware, both plain and with GREENHOUSE INCISED on it, is a mystery. Perhaps it has connections with the Caddoan area. The new variety of SICILY ISLAND INCISED (McNutt) is radically different stylistically from what went before, and some pieces are reminiscent of CROCKETT CURVILINEAR INCISED. Perhaps the most dramatic change is the dropping of French Fork and Chevalier, with Mazique being converted to a minor type (as it always was to the north), to be dropped entirely later in the phase.

If the ceramic shifts are dramatic, the changes in site plan are equally so. The oval plaza seems to be converted into a rectangle, with the midden ridges changing into discrete house mounds, a shift foreshadowed in the previous phase. A new rectangular (actually still slightly trapezoidal) platform mound is built on the northwest side, so that there are now three major mounds which form three corners of a square. This is the three mound pattern sometimes considered typical of Coles Creek. However, Greenhouse is atypical in that at this time a fourth smaller trapezoidal mound is built just north of and ancillary to the great southwest mound.

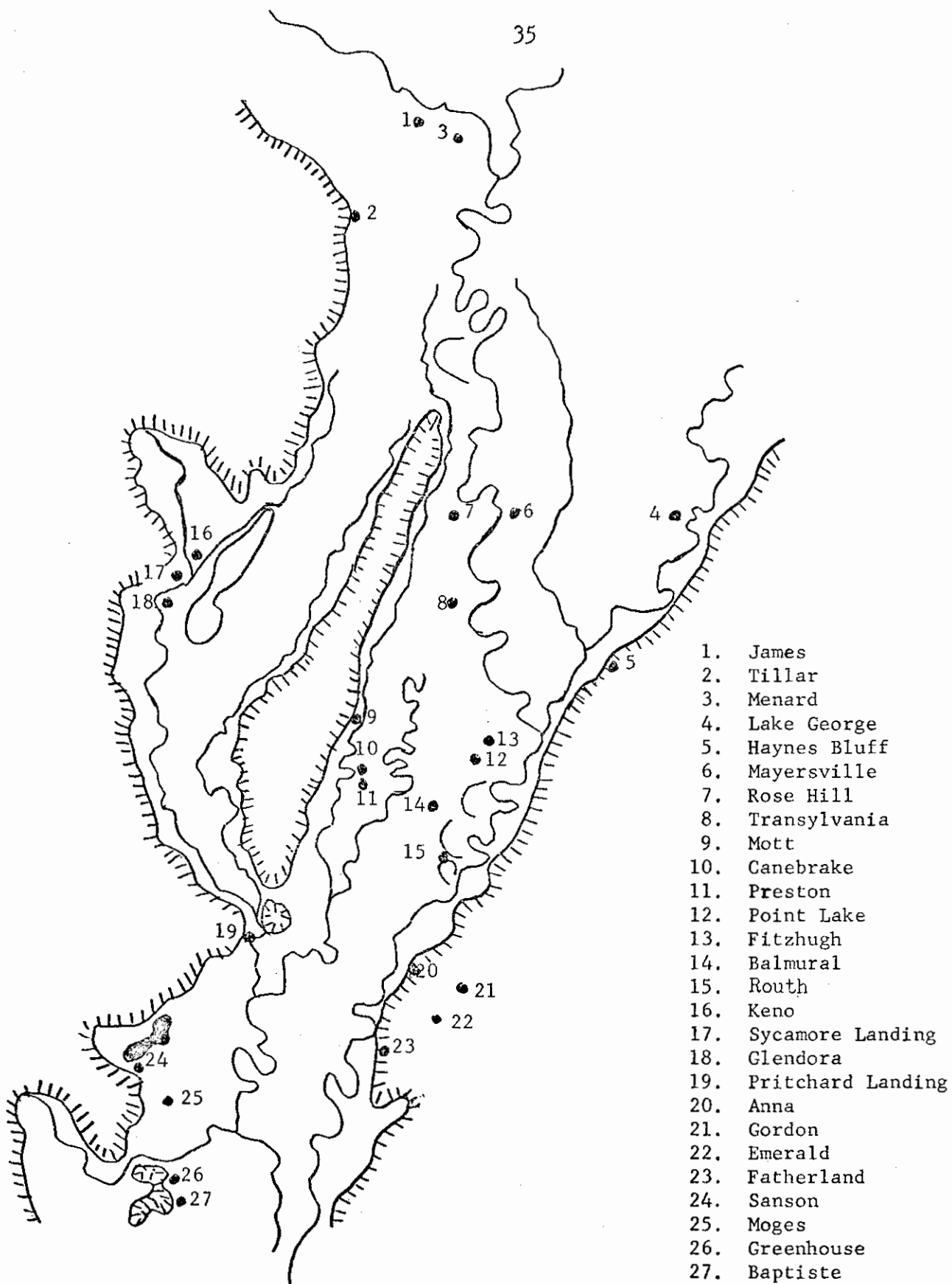
The mounds themselves are the same as before -- flat caps with circular structures on top -- except that now the top surfaces are swept clean of midden, and burials are no longer made in them. The old Fort Adams burial area is reopened on the southeast side of the plaza, which has no mound. If the burial area is considered equivalent to the mounds the symmetrical rectangular pattern of the site is apparent: the center of each side of the plaza is occupied by a sacred area, with house mounds and trash areas scattered in between. The burials in the new cemetery are all extended and supine, without grave goods. They are all adults and mainly males, a selected population which implies other (lower status?) burials elsewhere, perhaps off the site.

Toward the end of the phase CHEVALIER STAMPED seems to be reintroduced in a new variant (var. Gorum) which in the succeeding Spring Bayou Phase becomes the most popular type, surpassing even COLES CREEK INCISED, var. Mott. The arbitrary beginning of this new phase is set at an architectural transition which marks the completion of the shift from the Coles Creek platform mound tradition to the temple mound tradition. Mound construction is henceforth by true mantles covering the slopes and the top. Houses, as well as mounds, now seem to be rectangular. Both tops and slopes of the mounds are swept clean, so that the only appreciable amounts of Spring Bayou midden are found in trash areas at the edges of the site. A little midden is also found near the burial area which may continue to be used in this phase. The scarcity of midden for this phase gives the impression of a "vacant ceremonial center" settlement pattern, but this may be partly the result of their careful disposal of refuse. This architectural transition seems to correspond quite closely with a ceramic shift which sees not only the increase in popularity of Chevalier, but also the dropping of PONTCHARTRAIN CHECK STAMPED and GREENHOUSE INCISED, and a further stylistic evolution of SICILY ISLAND INCISED, a type which seems to die out during the life of the phase.

The final demise of the other early Coles Creek types and the introduction of the standard Plaquemine types, PLAQUEMINE BRUSHED and MANCHAC INCISED, occurs in a later period. However, the division between the Coles Creek and Plaquemine periods of Coles Creek Culture is put here because this is the time at which a distinctive native southeastern architectural and mound building tradition is fully submerged under a new tradition which may well be Mesoamerican in ultimate inspiration. This event seems a more significant watershed in the history of Coles Creek culture than any of the various shifts in ceramic fashion.

Spring Bayou is the last occupation of which there is any trace of the mounds at Greenhouse, but scattered later sherds in the southern part of the site suggest that the area was used as a campground by a later group; the pottery includes incised and brushed pottery identical to that known from the Sanson site and from the upper levels of the Crooks site on Catshoula Lake to the northwest of Greenhouse. Similar pottery was found by C. B. Moore on the Mayes site on Larto Lake to the northeast. It is also broadly similar to early Caddoan pottery known from sites further up the Red River, and seems to represent a brief Caddoan intrusion into this area from the west. This "Mayes Complex" is certainly one of the ancestral sources of the Late Plaquemine ceramics not actually represented at Greenhouse.

There is no further occupation at the site. By correlation with radiocarbon dates from the Tensas we can estimate the beginning of Black River at 300 A.D., and the Mayes Complex at 1200 A.D. Thus the Greenhouse data covers the whole span between the end of Hopewellian culture and the full development of Mississippian. These two cultural plateaus and their mound building traditions are separated in this locality by neither a single sharp transition nor by an indivisible period of gradual continuous development from one to the other. The data implies a more complex situation: a combination of abrupt transitions and gradual change with the intermediate stages not being predictable from a knowledge of the end points, and forming a minor culture climax in themselves.



## POST-COLES CREEK CULTURAL DEVELOPMENT IN THE UPPER

### TENSAS BASIN OF LOUISIANA

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Two seasons of archaeological survey and excavation in the Upper Tensas Basin of Louisiana have resulted in the formulation of four sequential, post-Coles phases: Routh, Fitzhugh, Transylvania and historic Taensa (Figure 1). The two earlier phases possess many of the ceramic traits that have been described by Quimby (1951) for the Medora Site, and they are identified as regional and temporal variants of a more widespread and enduring Plaquemine culture. The two remaining phases can be seen as later developments within the same Plaquemine framework.

#### Routh Phase

At the type site (24-L-7), Routh phase deposits have been found stratigraphically above deposits attributable to the Balmoral phase of Coles Creek culture. In addition to this large, multimound site, Routh phase components occur on several smaller sites throughout the Upper Tensas Basin. East of the Mississippi River, a component can be recognized at the Anna Site near Natchez, while in the Lower Yazoo Basin, near identity is to be seen between Routh and the Mayersville phase.

Ceramically, Routh phase is characterized by the typical Plaquemine types, PLAQUEMINE BRUSHED, MAZIQUE INCISED, variety Manchac, EVANSVILLE PUNCTATED, variety Sharkey, HARRISON BAYOU INCISED, L'EAU NOIR INCISED, variety L'eau Noir, L'EAU NOIR INCISED, variety Anna and HOLLYKNOWE RIDGE-PINCHED, variety Patmos. Of considerable diagnostic value are two plain vessel modes, the Preston bowl and the Delta City bowl. Both are carinated bowls with plain rims and with upper side walls that are concaved outward. They represent actually two extremes of a single vessel form: but in Fitzhugh phase, the Delta City bowl dies out while the Preston bowl develops into new distinctive forms.

LELAND INCISED first appears in Routh phase in the form of a single variety, Lide. Specific designs can be identified in this Lide variety that are developmental antecedents of designs found on the historic Fatherland Site burial pottery.

The relationship of Routh phase to the preceding Coles Creek culture is certainly of a complex nature. In the Upper Tensas Basin, Coles Creek has been divided into a number of sequential phases with Ballina being the classic manifestation and Balmoral representing a later development. Without going into detail, it can be said that there is evidence both for and against ceramic continuity from Balmoral phase into Routh phase. The important Plaquemine types, PLAQUEMINE BRUSHED, L'EAU NOIR INCISED and LELAND INCISED, apparently did not develop in the Upper Tensas Basin however, and in this sense there is a cultural break between late Coles Creek and early Plaquemine.


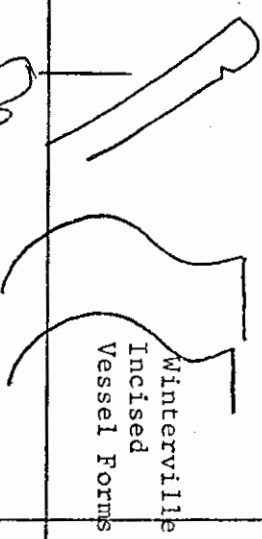
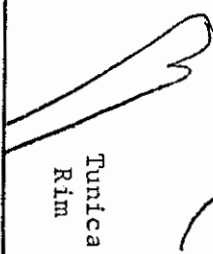




	Cultures	Upper Tennessee Basin Phases	Lower Yazoo Basin Phases	Greenhouse Site Phases	
1650	Historic	Taensa	Russell		
1500	Plaquemine	Transylvania	Lake George	?	
		Fitzhugh		Baptiste Site	
1350		Routh	Mayersville	?	
1200			Crippen Point	Mayes Complex	
				Spring Bayou	
1000	Coles Creek	???	Kings Crossing	Greenhouse	
		Balmoral			

FIGURE 1

### Fitzhugh Phase

Definition of the Fitzhugh phase is based on large excavated collections from two sites: the type site (23-L-1) and Transylvania (22-L-3). Numerous components of this phase occur throughout the Upper Tensas Basin and additional manifestations can be recognized at the Emerald, Anna and Gordon sites in Mississippi.

The Fitzhugh phase is characterized by the same basic Plaquemine ceramic complex that initially appeared in Routh phase. Change can be seen, however, in the disappearance of the Delta City bowl and the L'EAU NOIR INCISED varieties, L'eau Noir and Anna. The Preston bowl furthermore has developed into two new forms, the Walnut Bayou bowl in the Upper Tensas Basin and the Yazoo bowl in the Lower Yazoo Basin (Phillips n.d.). The former is characterized by a wider, upper side wall, a lower angle of carination and the frequent addition of the Tunica rim mode.

Of major interest is the appearance at this time of shell-tempering in the northern portion of the Upper Tensas Basin. At Fitzhugh, the ceramic collection is almost entirely clay-tempered: only a half dozen decorated sherds and a small number of plain sherds are tempered with shell. Farther north at the Transylvania Site however, approximately half the undecorated pottery is shell-tempered, and PLAQUEMINE BRUSHED, the normally dominant decorated type, is replaced by a new shell-tempered type, WINTERVILLE INCISED, variety Belzoni. Belzoni is characterized by deep, broad incision in festoon patterns on the neck and shoulder area of large, globular jars. One example with a strap handle has been found, but the typical vessel shape is definitely not that of the "standard Mississippi jar." Although there are possible clay-tempered antecedents for Belzoni in the Upper Tensas Basin, the general impression is of a new type introduced from outside the area.

In the Lower Yazoo Basin east of Transylvania, the contemporaneous Lake George phase is almost entirely shell-tempered, and it is possible that the Upper Tensas Basin was influenced by developments taking place there. Shell-tempering alone, not some larger Mississippian ceramic complex, seems to have entered the Upper Tensas Basin at this time. In the Fitzhugh component at Transylvania, we can see a certain amount of experimentation with the new tempering material. One or two sherds of several Plaquemine decorated types have sparse and minute flecks of shell added to their paste. The Yazoo bowl, with or without the Tunica rim mode, occurs primarily in clay-tempered paste but is also represented by identical shell-tempered examples. Clay-tempered examples containing sparse and minute flecks of shell also occur.

WINTERVILLE INCISED, variety Belzoni is the only addition to the typical Plaquemine ceramic complex in the Fitzhugh component at Transylvania. This unique position of Belzoni suggests that it may have served as the vehicle whereby the technique of tempering with shell was introduced into the Basin. With its large globular body and tall constricted neck, Belzoni is clearly a more suitable storage or general utility vessel than is the smaller, cylindrical-shaped PLAQUEMINE BRUSHED vessel.

### Transylvania Phase

The Transylvania phase has been found at only one site in the Upper Tensas Basin, the type site (22-L-3). Excavation here has produced a large collection of pottery and has stratigraphically demonstrated the temporal priority of the Fitzhugh phase.

The Transylvania phase is characterized by a completely shell-tempered ceramic complex. Despite several changes in the ceramic inventory though, there is strong evidence for developmental continuity with the preceding Fitzhugh phase. This is most conclusively demonstrated by the persistence in slightly modified form of the Yazoo bowl and Tunica rim mode and in the development of WINTERVILLE INCISED, variety Belzoni into two new varieties, LELAND INCISED, a minority type in Fitzhugh phase, is now quite abundant and is represented by several late varieties, including the Fatherland variety.

Much of the decorated pottery is classified as BARTON INCISED, but two new varieties have been established in order to handle the divergent nature of this material. One of these varieties, Stowers, appears to be a development out of MAZIQUE INCISED, variety Manchac. A good example of the variety may be seen in Cotter's report on the Anna Site (1951: figure 20, no. 6). The other variety, Atherton, has strong affinities to the west, along the lower Ouachita River, but is probably widespread throughout the Lower Yazoo Basin and extreme southeastern Arkansas also.

Transylvania phase must be seen as primarily a development out of local Plaquemine culture. The technique of tempering pottery with shell has been completely adopted if it is true, and new pottery types have evolved, but there is nothing in the ceramic complex to indicate important influences from "Mississippian" developments to the north.

Contemporaneous cultural developments farther south in the Upper Tensas Basin are poorly known. It appears though on limited evidence that the Fitzhugh phase continues on in time with little real change until just prior to the historic period.

### Historic Taensa

The historic Taensa sites, located along Lake St. Joseph, present an interesting assemblage of pottery. Shell-tempered pottery predominates, and of this, the majority is LELAND INCISED and BARTON INCISED, variety Stowers. In addition, clay-tempered Fitzhugh phase types occur in minor amounts. The picture, then, is not really too different from that existing at the Fatherland Site.

The major points of this paper may be briefly stated:

1. All phases from Routh through to the historic Taensa are basically Plaquemine in culture.
2. The technique of tempering pottery with shell enters the Upper Tensas Basin in the Fitzhugh phase, but does not penetrate to the central and southern portion of the region until immediately prior to historic contact.



3. There is no evidence for Mississippian influences other than that of shell-tempering having any substantial effect on local ceramic developments.

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## TAXONOMY AND DEFINITION OF FRENCH FORK INCISED POTTERY

John. B. Huner

In recent years archaeologists have become increasingly aware of the taxonomy, typology, and the theoretical basis of artifact types. While the number of articles written on this subject makes it impossible to discuss the complete change of ideology, several will be discussed in some detail and related to the present problems of this paper. The smallest definable unit of an artifact is the "mode." A mode is any divisible attribute of manufacture, decoration technique, design, or form (Rouse 1939:11-12). It has been the practice to define artifact types by reference to standard combinations of modes. As is well known, Southeastern pottery was standardized by the South-eastern Archaeological Conference Newsletter (Haag 1939). During this time the main emphasis of research was to establish chronologies and the over-all picture of prehistory in the Southeastern United States and the variations within a pottery type were generally disregarded. This is well illustrated by the type description of FRENCH FORK INCISED (Ford and Willey 1939) (See Appendix A). The great number of attributes or modes tend to leave a student who was not present at their conception in the dark as to what the exact limits of pottery types are. This inability to distinguish between the fine divisions of types brings up an interesting point as to the locus of types.

For many years there has been an argument among archaeologists concerning the basis of reality of artifact types. One school of thought argued that the archaeologist "discovered" types for they exist as natural units while the other school maintained that the archaeologist arbitrarily "invented" types and they had no basis of reality. The "Discoverist" school has been championed by Spaulding (1953 and 1954) and the latter school by Ford (1954a and 1954b). We tend to believe that an artifact type has some historical reality; however, the greater part of its division is arbitrary and dependent upon the classifier. This conclusion is reached because it is apparent that many design concepts are wide spread and seem to be part of a cultural stream, but if this were true on a local level, there would be no difficulty in separating similar types. It is obvious that we do not know the aboriginal artists' concepts of how a pot should be decorated; in some cases the artists most probably did not make any clear distinctions themselves.

The constant reworking of material to gain greater insights into prehistoric culture has made it obvious that certain modes clustered within a given type and could be distinguished from other modal clusterings of the same type. This gave rise to two papers in 1958 which established the framework for dealing with these modal clusterings. One paper was developed to establish a frame of reference for Southwestern prehistoric ceramics (Wheat, Gifford, and Wasley 1958) and the other was an adaptation of the Wheat-Gifford-Wasley system to Eastern ceramics (Phillips 1958). Both of these papers will be followed in this discussion of FRENCH CREEK INCISED taxonomy.

It has already been shown that the smallest unit of ceramic taxonomy is the mode. The next level of complexity is the variety. A variety is defined as a group of attributes or modes which can be distinguished from a type by their significant clustering and exhibit a more restricted areal and temporal distribution than the type. This is an arbitrary division which is not easily defined. In other words, a variety cannot differ too greatly from the type or it becomes another type and a type always has a greater spatial and temporal distribution. A hypothetical clustering of modes of FRENCH CREEK INCISED will illustrate the variety concept. Referring back to the type description (Ford and Willey 1939), it is observed that two attributes or modes are present along with others: cross-hatched background and shallow bowl vessel forms. If at a site or sites significant clusterings of these two modes are found, say 50 per cent of all French Fork found, and these vessels still maintain the concept of FRENCH FORK INCISED, i.e., negative design motif composed of meander and wave-like patterns; then a variety can be said to exist. It is restricted in time and space but still conforms to the type design concept.

The definition of a type becomes especially difficult in the Red River Mouth Area because most types are composites of various varieties. Phillips defines type as ". . . the sum total of the established variety and all other varieties" (1958:119). However, there is no established variety for FRENCH FORK INCISED as reference to Ford and Willey (1939) or Ford (1951) will show. The unifying criterion for FRENCH FORK INCISED is the negative design motif with meander or wave-like patterns. Phillips equates type with the ceramic cluster of Wheat, Gifford, and Wasley (1958:118). The Southwestern ceramic cluster is composed of one type and its varieties (Wheat, Gifford, and Wasley 1958:38). Phillips objects to this term and substitutes "type" on the grounds that the use of "and its varieties" implies a dependence of the variety upon the established type. He proceeds to point out that a variety is ". . . neither included in, dependent upon, nor inferior to. . . ." (1958:118) the established variety (or type). In other words, a variety is a local manifestation (temporal and spatial) of a cultural concept shared with other peoples. Phillips also points out that "Most of our types (Eastern) are more like clusters whose varieties are often referred to but seldom defined as such" (1958:118). This is obviously the case for FRENCH FORK INCISED. Ford, as mentioned above (1962:62), states that there are at least five methods of rendering the negative design or, as we interpret this, five varieties, some of which do not include the use of incised lines. Thus, by using the methods established by Phillips and Wheat et al., much more specific information is implied and hopefully a better understanding of temporal and spatial relationships. For example, by using the term FRENCH FORK INCISED var(iety) cross-hatched we can denote a variety of FRENCH FORK INCISED which was found at a given site or sites and in a restricted stratigraphy. Therefore, we have indirectly deduced that there was in a specific area at a unique time a culture or group of people who, while still sharing ideas with the mainstream of cultural thought, was at least partially distinct. While the term FRENCH FORK INCISED var. cross-hatched has a very restricted definition and implications, the term FRENCH FORK INCISED standing alone means FRENCH FORK INCISED var. unspecified and includes any of the other varieties.

The next higher combination in the Wheat-Gifford-Wasley system is the ceramic system.

A 'ceramic system' is a grouping of type clusters (types in Phillips' terminology) which are related in design style, or surface manipulation when present, vessel form, and general

technology (broadly speaking a class of pottery), and which range over a wide area, that are roughly contemporaneous (Wheat, Gifford, and Wasley 1958:40-1).

The widespread relationships of FRENCH FORK INCISED to similar types in other areas have been pointed out by Ford (1952), Willey (1949), and Newell and Krieger (1949). Ford terms the negative design motif as "roughened backgrounds" (1952:354) and states that this concept probably originated in Florida during the Weeden Island Periods as WEEDEN ISLAND INCISED and WEEDEN ISLAND PUNCTATE and moved westward into the Lower Mississippi River Valley where it manifested itself as FRENCH FORK INCISED. From here it spread into the Caddoan area of Texas where the negative design motif became characteristic of CROCKETT CURVILINEAR INCISED and CROCKETT-PENNINGTON HYBRIDS (Ford 1951: 357-59). At this point a brief description of the Weeden Island, French Fork, and Crockett types should be given to illustrate the changes involved as the negative design motif moved westward across the northern coast of the Gulf of Mexico. WEEDEN ISLAND INCISED consists of contrasting smoothed (or positive design) areas with roughened (or negative design) areas and terminal punctations at the ends of lines. Frequently stylized birds are depicted and the design areas are outlined by incised lines with the background usually rendered by the same technique. WEEDEN ISLAND PUNCTATE differs from WEEDEN ISLAND INCISED by the use of lines of punctates both as the background and to outline the design areas. There is no repetition of designs in the Weeden Island Types as there is in FRENCH FORK INCISED. FRENCH FORK INCISED consists of repeating series of meander and wave-like designs with the negative design motif rendered by punctates, incised lines, and cross-hatching. The design areas are outlined by incised and punctate lines and the use of terminal punctates is not uncommon. As stated before, except for the repetition of meander and wave-like patterns in FRENCH FORK INCISED and the formalized bird designs of WEEDEN ISLAND PUNCTATE and INCISED, both types are highly similar. In the Caddo area, the meandering patterns of FRENCH FORK INCISED become scrolls with circles at the centers, as CROCKETT CURVILINEAR INCISED. The same background techniques are found except that the cross-hatched background is not present in CROCKETT CURVILINEAR INCISED.

As can be seen, there is an obvious relationship between the Weeden Island, French Fork, and Crockett Curvilinear types which span the Gulf Coast. Sears termed the various design concepts including the negative design motif which are found in this area as part of the "Gulf Coast Tradition" (Sears 1960). It is interesting to note that Sears believes that the negative design motif originated in the Lower Mississippi River Valley and radiated to the surrounding areas (Sears 1964). While we feel that this design concept originated in the Florida area, it is a moot point for our purposes. It is readily apparent that the negative design motif for the Gulf Coast Tradition fits the definition of a ceramic system as defined by Wheat, Gifford, and Wasley. Therefore, I propose that the term Gulf Coast Negative Design Ceramic System be introduced to include the WEEDEN ISLAND INCISED and PUNCTATE, FRENCH FORK INCISED, CROCKETT CURVILINEAR INCISED, and any other types of the negative motif that are introduced. Type is used here as the sum total of the varieties. It should be noted that the Weeden Island types are probably varieties of one type, and the same is true of the CROCKETT CURVILINEAR INCISED and CROCKETT-PENNINGTON HYBRIDS of Newell and Krieger (1949). However, by definition, FRENCH FORK INCISED type belongs to the Gulf Coast Negative Design Ceramic System and has been defined as

a type whose decoration consists of:

Meanders and wavy patterns formed by the smooth, unroughened surface of the vessel. . . . These areas or bands were made to stand out by roughening the background . . . so in effect this is a 'negative' type of design (Ford 1951:62).

Therefore, any ceramics that fit into this description are FRENCH FORK INCISED or, to keep Phillips' system in mind (FRENCH FORK INCISED var. unspecified).

The range of the type FRENCH FORK INCISED var. unspecified is very wide. French Fork varieties have been found at the Spiro Mounds in Oklahoma (James A. Brown, personal communication), the Grenshaw and Kirkham Sites in Southwestern Arkansas (Dickinson 1936; Dickinson and Lemley 1939), and as far north as the Memphis area in the Mississippi River Valley (Phillips, Ford, and Griffin 1951: 100-101). This wide distribution of FRENCH FORK INCISED indicates the necessity for establishing the localized varieties to determine the flow and transportation of cultural ideas.

To determine the number of possible varieties one multiplies the number of modes together to determine the total number of possible combinations hence varieties. Ford states that the techniques of outlining the designs are:

Incised lines, Overhanging Incised lines, Incised lines with delicate, spaced punctates, or occasionally, by punctates arranged in rows. In some cases there are large, triangular punctates at the ends of lines (1951:62).

He also points out that the background design techniques consist of

Punctates usually arranged in lines. Parallel incised lines placed closely together, incised cross-hatching, no background roughening, decoration placed on triangular ears, and red slip background (1951:62).

These modes, of course, combine to form varieties. Unfortunately, Ford does not demonstrate any combinations of outline and background techniques so that there is the possibility of 36 varieties. In addition, Ford illustrates five rim forms and four body shapes (1951:63-64) which combine to produce a possibility of 720 varieties ( $6 \times 6 \times 5 \times 4 = 720$ ). This high number of varieties is, of course, very unlikely, and by simply studying the sherds and noting the clustering of modes, the varieties can be established. It is this process, utilizing Ford's modes which were previously stated, that can be used to establish the varieties of FRENCH FORK INCISED. Thus, as a summary, the taxonomy and definition of FRENCH FORK INCISED is:

CERAMIC SYSTEM:

Gulf Coast Negative Design--including CROCKETT-

CURVILINEAR INCISED var. unspecified; FRENCH FORK  
INCISED var. unspecified; and WEEDEN ISLAND IN-  
CISED and PUNCTATE var. unspecified.

TYPE:

FRENCH FORK INCISED var. unspecified.

VARIETIES:

Unspecified for the Red River Mouth Area; In prepara-  
tion in the Tensas Basin; and Coastal Louisiana  
(Huner 1967).

EDITOR'S NOTE:

An unpublished manuscript by Philip Phillips (Archaeological Survey  
in the Lower Mississippi Valley II: 1949-1951) to be published soon in the  
Harvard Peabody Museum Papers series divides FRENCH FORK INCISED into six  
varieties, as follows:

FRENCH FORK INCISED, var. French Fork

FRENCH FORK INCISED, var. Iberville

FRENCH FORK INCISED, var. Laborde (tentative type)

FRENCH FORK INCISED, var. Larkin

FRENCH FORK INCISED, var. McNutt

FRENCH FORK INCISED, var. Wilzone

## APPENDIX A

Ford and Willey published the first type description of FRENCH FORK INCISED pottery (1939:9-11). This definition was essentially the same as the most recent (Ford 1951:62-67). The following is the type description as it appeared in the first Newsletter of the Southeastern Archaeological Conference:

- TYPE NAME: FRENCH FORK INCISED
- PASTE: Method of Manufacture: Coiled.
- Tempering: Large particles of clay and small particles of carbonized matter, which shows as very black dots, and a small amount of sand.
- Texture: Fine. Paste is contorted and very compact.
- Hardness: Averages 2.5. Range 2 to 3.
- Color: Usually gray or buff. Ranges from black to reddish brown. Is sometimes marked with firing clouds. Interiors are often smudged.
- SURFACE FINISH: Modifications: Usually smooth and soapy to the touch. Shows marks of a polishing stone. Polishing marks run parallel to the rim. Finish is fairly smooth and in exceptional cases a rather high polish has been achieved. In some cases the surface is rough and tempering material shows. This may be due to erosion.
- Filming: In very few cases the interior shows a red slip.
- DECORATION: Techniques: A number of techniques are noted in French Fork Incised. The designs are outlined by overhanging incised lines with punctates spaced on them or wide incised lines. Large triangular punctates or punctates made with a hollow reed are found in and at the ends of the lines.
- Design: The fundamental principles of the design appears to be the contrasting of roughened with smooth bands and areas. This roughening is achieved in several ways. Overhanging incised lines usually running parallel to the rim and often ending in deep punctates, rows of triangular punctates, scattered triangular punctates, arrangements of tear drop-shaped punctates, delicate dentate stamping, cross-hatching made with fine lines or, in exceptional cases, red pigment. This background is often depressed below the surrounding vessel surface. The usual design is the curving meander. The meander is usually brought out in this negative by means of a roughened background. Waving or undulating bands are another frequent motif. Usually the design motif is repeated over again around the vessel.
- Distribution: Nearly always confined to a band encircling the upper part of the vessel. On vessels which show an incipient neck, this neck bears the band of decoration.

- FORM:**
- Rim:** Various treatments of folded rim strap mark this type. Rims are very often thickened by turning over a strap of clay to the outside and around the lip. Interior thickening, triangular in cross section, is fairly frequent. Occasionally, one or more incised lines are inscribed in the thickened rim.
  - Lip:** Lips are either rounded or flattened in the plane of the vessel mouth. In the latter case, there may be one or more incised lines inscribed in the lip.
  - Body:** There are three major body forms. The most common of these seems to be a globular vessel with gently incurving shoulder and a small aperture. In a few cases, the vessel body has four lobes. The second very common form is much larger, usually ten or fifteen inches in diameter. The body is shaped very much like a cauldron and generally has a flat bottom. The upper walls curve slightly inward and there is a neck which extends vertically from one to three inches high according to the size of the vessel. It is upon this neck that decoration is found on this vessel shape. In a number of cases, this vertical neck shows a suggestion of cambering which is reminiscent of the Marksville rim. The third vessel shape noted is a shallow concaved bottom bowl which has four large triangular-shaped ears extending almost horizontally from its rim. These ears are arranged so that although the mouth of the bowl is round, the extreme edges of the ears form a square. Small ears suggestive of the influence of this type are occasionally found on the rims of the two vessel shapes described above. In all cases, four ears seem to have been used.
  - Base:** Bowls seem to show the only cases of convex bases found with this decoration. The predominant form is a flat base with a marked angle between the base and the vessel walls. These bases are usually square or rounded in shape.
  - Thickness:** Thickness ranges from 4.5 mm. to 8 mm. with an average of about 6 mm.
  - Appendages:** The triangular ears noted above are the only appendages that appear on this type.
- USUAL RANGE OF TYPE:** French Fork Incised in its typical form seems to be confined to Southwest Mississippi and the Mississippi Valley area of Central and Northern Louisiana. It has been found up the Red River as far as the Crenshaw Site in Southwestern Arkansas.
- CHRONOLOGICAL POSITION OF TYPE IN RANGE:** Stratigraphic studies at the Greenhouse Site show that this type belongs to the early and middle stages of the Coles Creek occupation of the lower Mississippi Valley. Stratigraphic results from the Greenhouse Site verify this.
- PROBABLE RELATIONSHIPS OF TYPE:** French Forks(sic) appears to have evolved from the body decoration of Marksville types. In it can be seen features indicating relationship to nearly all of the types of the Marksville complex. The use of negative and positive areas to form a design is a feature which it holds with Marksville Stamped and Churupa Punctated. The use of punctates at the ends of incised



lines appears sometimes in Yokena Incised. Of course, these earlier types used hemi-conical punctates whereas those on French Fork are nearly always triangular. The incised lines appearing in French Fork are sometimes round bottomed and suggest Marksville incising very strongly. The use of a very delicate dentate stamp, as it is sometimes found bridges the gap between Marksville stamped and the rows of triangular punctates used to mark the background of French Fork. Stamping with unnotched rocker as it is found in late Marksville Stamped may have developed into the close spaced incised lines which are another type of French Fork background. The relationship in vessel form is not always so obvious, however, the large cauldron shaped vessel with vertical neck might be interpreted as an outgrowth of the typical vessel shape of the Marksville period. The frequent cambering of this neck makes such decoration to material from the Northwest Coast of Florida is obvious. The primary distinction seems to be in paste. (Ford and Willey 1939:9-11).

There has been a great deal of new information published since 1939 concerning the temporal and spatial distribution of FRENCH FORK INCISED and its allied forms. In 1939 Ford and Willey were concerned mainly with the temporal aspects of FRENCH FORK INCISED and its evolution from earlier forms. A much more detailed discussion of the spatial aspects of this type accompanies Ford's type description (1951:62-67) in the Greenhouse Site report.

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