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PROGRAM

FIFTH SOUTHEASTERN ARCHAEOLOGICAL CONFERENCE

LOUISIANA STATE UNIVERSITY

Baton Rouge, La.

September 4-5, 1940

Fifth Southeastern Archaeological Conference

James A.Ford, Chairman
George I. Quimby, Jr., Secretary
William G. Haag, Editor of News Letter

Program

Wednesday, Sept. 4th

Morning Session

"Ethnographic Data Pertaining to the Bayou Goula"
Andrew C. Albrecht, L.S.U.-W.P.A. Archaeological Survey.

"Skeletal Types in East Texas"
Marcus Goldstein, University of Texas-W.P.A.Archaeological Project.

"Skeletal Types at the Irene Site"
Frederick S. Hulse, Chatham County, Georgia Archaeologica Project.

"Skeletal Types in Kentucky"
H.T.E. Hertzberg, University of Kentucky.

"Types of Artificial Cranial Deformation in the Eastern United States. Georg K. Neumann, Museum of Anthropology, University of Michigan.

"An Analytical System for Pottery Classification"
Alex. D. Krieger, University of Texas-W.P.A. Archaeological Project.

Afternoon Session

"Classification of Archaeological Data from Haiti"
Irving Rouse, Yale University.

"Application of the McKern System to Southeastern Data"
Charles Fairbanks, Ocmulgee National Monument, N.P.S., Macon, Georgia.

"The Baumer and Kincaid Components"
John Bennett, University of Chicago.

"The Archaeology of Carbondale"
Moreau Maxwell, Illinois State Museum-W.P.A. Archaeolical Survey.

"The Central Mississippi Valley Archaeological Survey"
James B. Griffin, University of Michigan.

"Natchez Trace Archaeology"
Jesse D. Jennings, National ParkService.

Lecture and movies on Central America
Franz Blom, Director, Middle American Research Institute, Tulane University.

Thursday, Sept. 5th.

Morning Session

"Archaeological Investigations in East Texas"
A. T. Jackson, University of Texas.

"Archaeological Investigations in N. W. Louisiana"
C. H. Webb, Shreveport, Louisiana.

"Archaeological Investigations in Southern Florida"
John Goggin, University of New Mexico

"Archaeological Survey of North Carolina"
Joffre Coe, University of North Carolina

Afternoon Session

"Chronology of the Southern Illinois Region"
John Bennett, University of Chicago

"Chronology of the Kentucky Region"
Ralph Brown, University of Kentucky

"Chronology of the South Atlantic Seaboard"
Charles Fairbanks, Ocmulgee National Monument

"Chronology of North Florida"
Gordon Willey and Dick Woodbury, Columbia University

"Chronology of the Lower Mississippi Valley"
James A. Ford, Louisiana State University

"Chronology of the Bilbo Site in Georgia"
A. Waring, Yale University.

Types of Artificial Cranial Deformation in the Eastern United States
(Abstract)

Georg K. Newmann

In order to secure accurate information on the distribution of artificial cranial deformation both in time and in space as an aid to cultural reconstructions, the allocation of burials, etc., a series of diagrams[1] illustrating six types of deformation found in the eastern United States are given in the following pages. Another type, the lambdoid deformation of the Chaco Canon region of New Mexico, is merely included for comparison with natural lambdoid flattening and obelionic deformation. All these finer distinctions of types of artificial deformation and a number of others have been previously recognized and have appeared in print, but only those that were found to be characteristic of groups of people have been accepted, thereby eliminating individual variations. As for occurrence only a small number of groups for which the type is characteristic are given as detailed records on geographical distribution, time periods, and percentage counts of deformed crania are still very incomplete and beyond the scope of this paper.

Obelionic deformation (Fig. 1) occurs between bregma and lambda with compensatory changes such as broadening of the vault in the anterior parietal and temporal regions. The plane of flattening forms approximately an angle of 30 to 40 degrees with the ear-eye plane. First described by Stewart. Distribution: northeast shore of Pelican Lake and Demorey Key, Florida.

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1. I am indebted to the curatorial staffs of the U.S. National Museum, the University of Chicago, the Peabody Museum of Harvard University, the Museum of Archaeology of the University of Kentucky, the University of Tennessee, the Archaeological Laboratory of the Alabama Museum, the American Museum of Natural History, and the Dickson Mound Museum for their kindness in allowing me to examine their collections; the first four of the named institutions for the use of eight skulls for illustrative purposes; and to Dr. T. D. Stewart of the U.S. National Museum for the craniograph diagram reproduced as Fig. 9 in this paper. The numbers of the skulls illustrated are: Fig. 1--U.S.N.M. No. 345,889, male, Canal Point, Fla.; Fig. 2 -- U of C. No. TVL-1, male, Tazewell County, Ill.; Fig. 3--U.S.N.M. No. 327,101 male, Chaco Canon region; Fig. 4--P.M.H. No. 27,205 Male, Brentwood, Tenn.; Figs. 5 & 6--U.S.N.M. No. 115,464 female, Lynxville, Wis.; Fig. 7--U.K.M.A. No.22-17,male, Norris Basin, Tenn., Fig. 8 -- U.S.N.M. No. 243,051, female, Vicksburg, Miss.; and Figs. 9 & 10 -- U.S.N.M. No. 362,447, female, Natchitoches, La.

Natural lambdoid flattening (Fig. 2) has been illustrated here to give an idea of the degree of development of this morphological attribute and its intermediate position between artificial obelionic and lambdoid deformation when considered from the point of view of an angle formed by the plane of flattening and the ear-eye plane.

Lambdoid deformation (Fig. 3) in a skull from the Chaco Canon region of New Mexico. The plane of flattening is inclined at an angle of 50 to 60 degrees to the ear-eye plane. It was first described by G. Retzius in a series of crania from the Mesa Verde, and occurs only in a mild form as an occasional individual variation in crania with simple occipital deformation in series from the southeastern states.

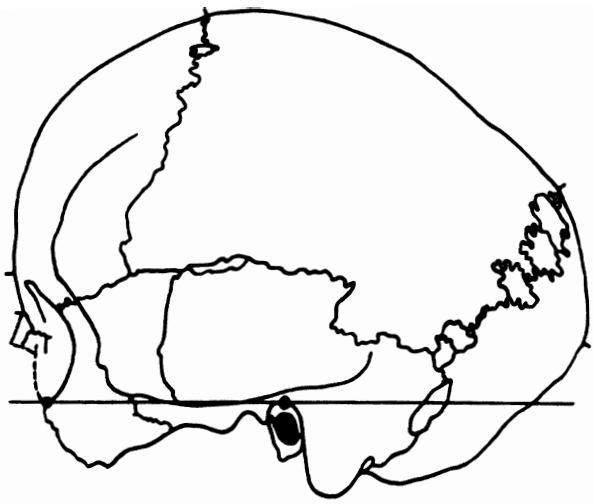
Simple occipital deformation (Fig. 4) is essentially at right angles to the ear-eye plane, is probably unintentional, often markedly asymmetrical, and generally does not involve the frontal bone. The earliest appearance of this type of deformation is in crania from Adena sites in northern Kentucky and certain late Hopewellian sites in Illinois and Indiana, but in general represents a late practice associated with the development of the Mississippi horizona in the Southeast, which are estimated by various research men workin with the material as after 1450.

Bifronto-occipital deformation (Figs. 5 and 6) is another of the earlier types of deformation that has been associated with a number of Hopewellian sites by Stewart. It consists of bilateral flattening that produces a very narrow frontal bone associated with a moderate degree of vertical occipital flattening. To a certain extent the frontal flattening compensates that of the occipital resulting in vault diameters that are close to normal for the series.

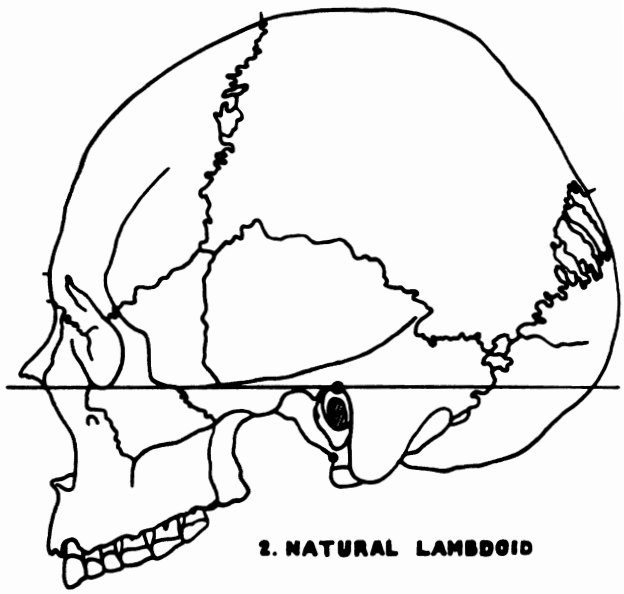
Fronto-verticooccipital deformation (Fig. 8) is characterized by flattening of the frontal, probably by means of a board, in conjunction with the simple vertical occipital deformation produced by tying the head of the infant to a flat surface. In the lower Mississippi valley the earliest record of this type of deformation is from the Cole's Creek horizon in Louisiana. In central Illinois it is characteristic of some of the Spoon River focus (Middle Mississippi) crania, in eastern Tennessee in those of the Large-log town house horizon, and in skulls from northern Kentucky at the Fox Farm (Fort Ancient aspect) site. It probably also extended into th historic period among the Cherokee and Creeks.

Fronto-parieto-occipital deformation (Fig.7), another type of deformation that was recently recognized and described by Stewart, consists of flattening in three planes, nearly at right angles to each other, as shown in the diagram of a skull from the Norris Basin in eastern Tennessee. This form of deformation is sharply differentiated from the fronto-verticooccipital type in that compensatory growth has taken place laterally instead of superiorly. According to all indications this type of deformation seems to be confined to the territory occupied by the Cherokee in sites that date somewhere between 1600 and 1750.

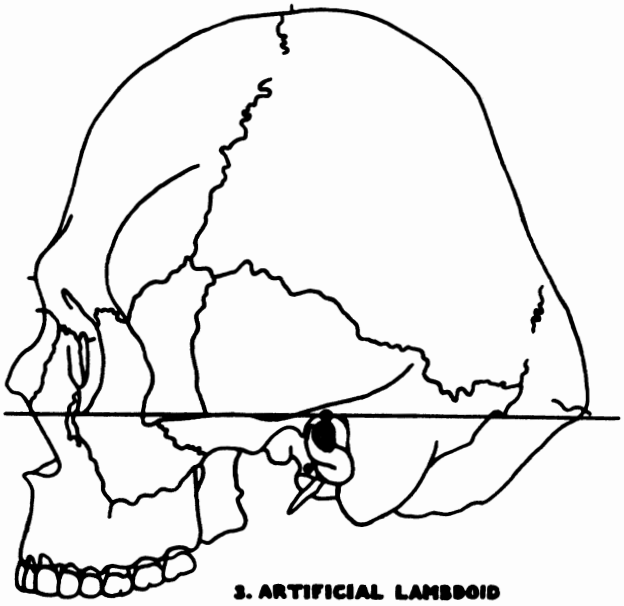
Parallelo-fronto-occipital deformation (Figs. 9 and 10) consist of artificial flattening in which the occipital region is affected b the placing of a pad at the base of the occiput in such a manner as to produce rough parallelism with that of the frontal bone. Compensatory growth is to large extent lateral as may be seen in the



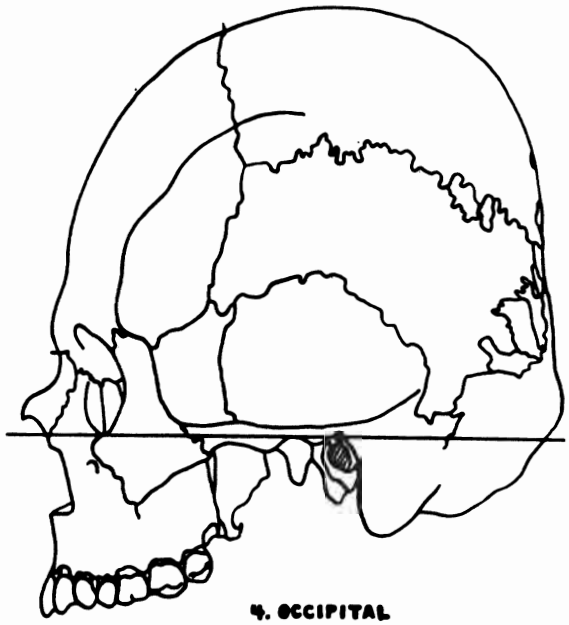
1. OBELIONIC



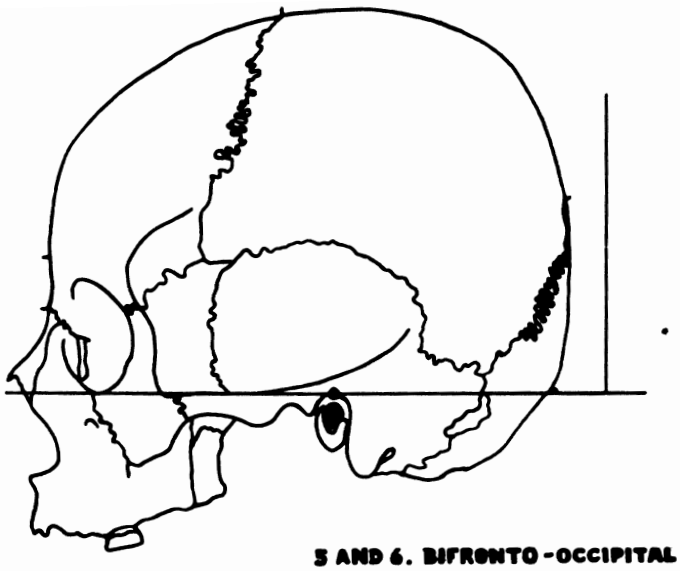
2. NATURAL LAMBDOID



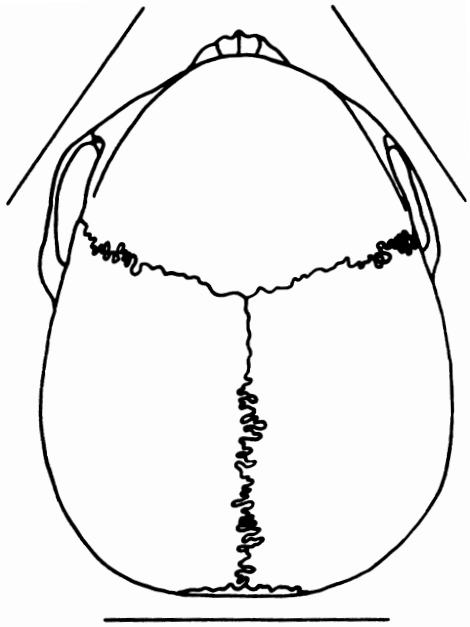
3. ARTIFICIAL LAMBDOID

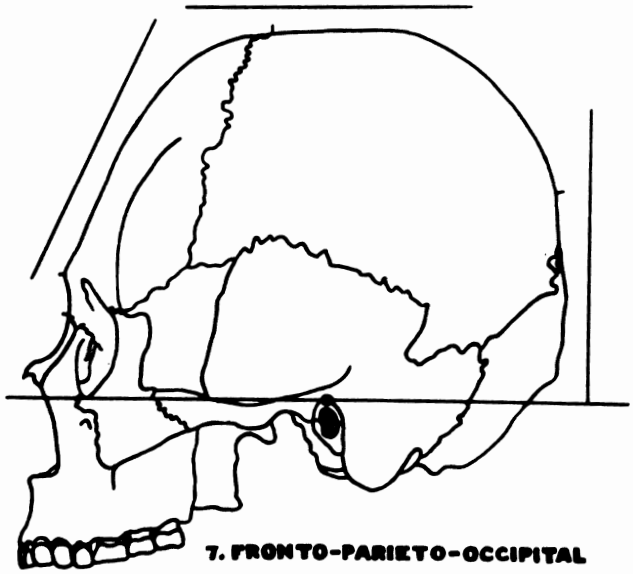


4. OCCIPITAL

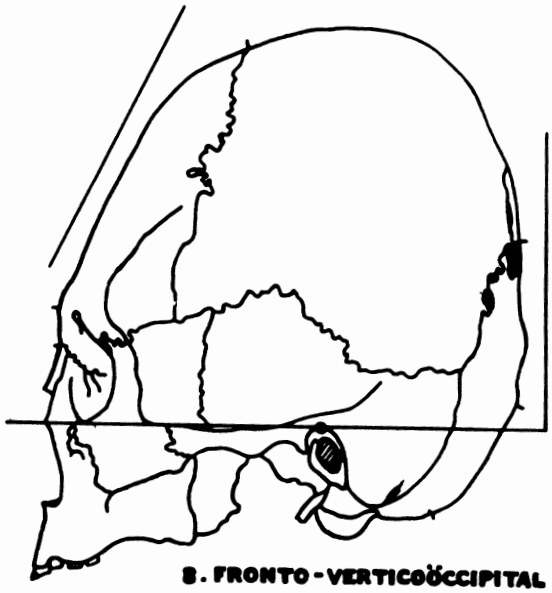


5 AND 6. BIFRONTO-OCCIPITAL

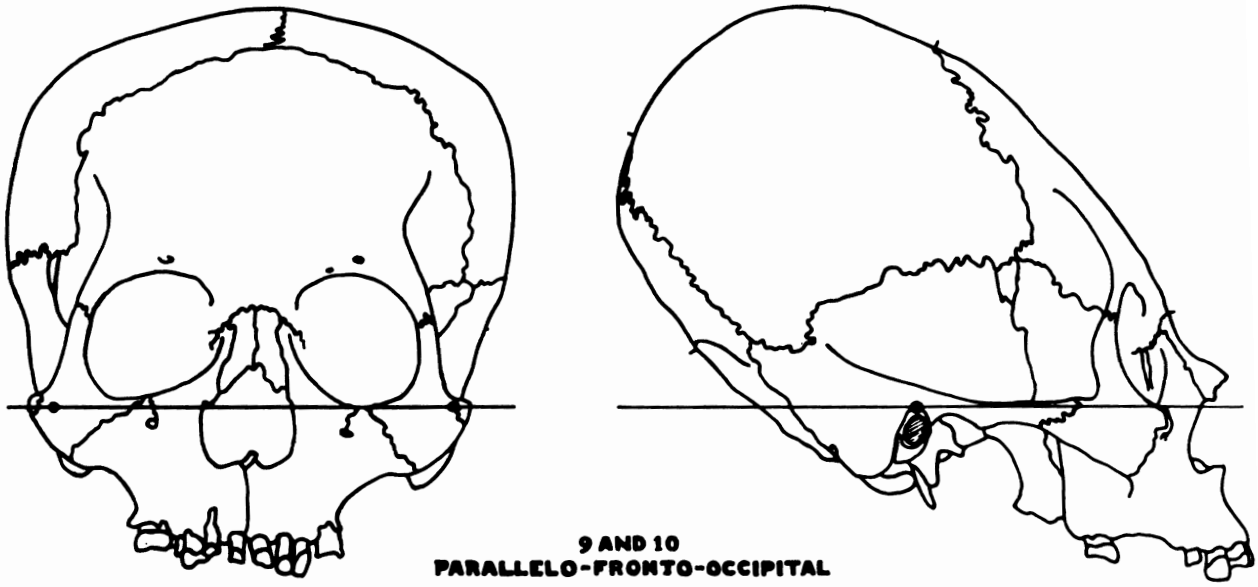




7. FRONTO-PARIETO-OCCIPITAL



8. FRONTO-VERTICOÖCCIPITAL



9 AND 10
PARALLELO-FRONTO-OCCIPITAL

front view diagram of an historic Caddo female from Natchitoches, Louisiana. This sort of flattening can be easily differentiated from the annular type in which the compensatory growth is entirely superio-posterior. In Large-log town house horizon crania from eastern Tennessee the parallelism of the planes of flattening may only represent individual variations.

Crania from East Texas

Marcus S. Goldstein

Skeletal collections at the University of Texas include fairly large series from practically every section of the state. A comprehensive study of these is in progress and should be completed by April of 1941. Some definite word can be said about northeast Texas at this time. Artificial deformation of the skull was practiced in this area, the custom becoming less frequent as one proceeds west and south. It does not occur in central or even in the southern counties of the northeastern area. A group from northeast Texas (Lamar County, near the Red River) exhibits a large skull; dolichocephaly (undeformed males, 73.1; females 74.7); and a very high vault. Estimated stature based on the long bones indicates, for males, 165.2 cm., for females, 153.6 cm.

The northeast Texas group is manifestly divergent from the mesocephalic and high vaulted Indians of the other Gulf states, in head form, at any rate.

Skeletal Types in Kentucky

H.T.E. Hertzberg

A summary of the status of physical anthropology in Kentucky includes (1) an enumeration of the sources of skeletal material according to cultural associations, and (2) a description of the material itself.

Sources

In Lexington we have about 2,800 burials of various sorts and origins.

(1) The chief sources of skeletal material are the shell-heaps of the western counties. Fully 2,200 of the total number of burial have been exhumed from such cemeteries. One famous site on the Green River is the heaviest contributor of all, Indian Knoll in Ohio County, sampled by Moore in 1915. Excluding the 126 skeletons exhumed by him and sent to the Army Medical Museum, this site has produced about 700 burials in excellent condition, with more to come. Other shell mounds in the same origin have produced series totalling roughly 500, 450, 400, 250, 150, 100, and others smaller in number, most of which still awaits analysis.

(2) Fort Ancient cemeteries in Northeast Kentucky have contributed about 400 burials. Here, again, there are good reasons for expecting much more material. Almost 350 skeletons have come from one site, indeed, from a zone about 100 feet square; and the site itself is over 12 acres in extent. Large difficulties have unfortunately prevented further work in this area.

(3) Kentucky seems to have produced something hitherto relatively unknown in other regions, namely, mensurable remains associated with the Adena culture. Peculiar local conditions of drainage

and other factors have aided the preservation of a sizable number of skeletons. Fifty-five burials have been removed from two large mounds in Montgomery County, and about twenty more burials have been taken from other mounds. The fifty-five burials first mentioned have been studied and reported on, and it is hoped that the available series soon will be increased appreciably as the result of excavations now in progress.

(4) The few remaining skeletons are divided into relatively small groups affiliated with rock-shelter, rock-grave, Tenn.-Cumb., and Hopewell cultural remains.

Physical Typology

(1) The shell mound people, despite their large numbers, have not been studied to any great extent. Two well-known series are available from Kentucky, that from Indian Knoll (published in Hrdlicka's catalogue of Human Crania, 1927) and Skarland's Chiggerville group. The two groups are virtually identical. Crania are of medium size, being generally longheaded and highheaded (dolico-to-mesocrany, hypsicrany, akrocrany). Faces are of medium length, and are relatively broad (euryprosopic, mesenic). Nasal apertures are relatively narrow (leptorrhine to mesorrhine). Orbits are low or medium (chamaeconchic or mesoconchic) and palates are wide relative to their length (brachyuranic). Stature is medium (Skarland, 164 cm). These crania are seldom deformed.

The shell-heap dwellers are thus seen to be of the type designated as "Algonkin" by Hydlicka and "Sylvid" by Georg Neumann.

(2) The Kentucky Fort Ancient crania yet have not been studied as a series, and therefore cannot be described. Georg Neumann has in progress a monograph dealing with these people in Illinois and elsewhere. Cursory observation, however, of the several complete Fort Ancient crania in the museum indicates a pronounced occipital or fronto-occipital deformation of rather small skulls which appear to have been meso- or brachycephalic in life. In Illinois the Fort Ancient people correspond to what Neumann has called the "Centralid" type.

(3) The latest addition to physical typology in this area is that of the newly-discovered Adena mound builder. A bulletin describing the remains from one mound has been published recently, and a second is forthcoming soon, dealing with still more materials from another mound.

In general, the Adena population has large, round, and high heads with absolutely long and wide faces, thus constituting a disharmonic cranial type. Nasal apertures were relatively narrow (leptorrhine). Skulls were usually deformed, most often left occipitally. Stature in the group averaged about medium, although some members were as much as 177 cm.

A large Adena mound in Boone County has produced a number of skeletons, mostly fragmentary. It is interesting to note, however, that one skull, almost intact, exhibits round-headedness, high-headedness, left occipital deformation, and a very long, wide, and rugged face with a leptorrhine nasal aperture, precisely the same cranial type reported from mounds considerably further south.

(4) The only figures at present available on rock-shelter dwellers come from a small group of female adults, three, to be correct. No males have been found buried in the rock shelters.

The skulls are of small to medium volume, and are meso-, hypsi-, and akrocranial. They show narrow frontals and pronounced occipital curve with some lambdoid flattening. Faces are of medium length, and nasal apertures are leptorrhine to leftorrhine. Statures run to about 155 cm. It seems reasonable to think that males would be long-headed and of medium stature.

Summary

Kentucky is thus seen to have been inhabited by both major stocks; the rather long-headed, undeformed, gracile shell-heap and rock-shelter dwellers; and the taller, more rugged, more muscular round-heads who built earth mounds and practiced cranial deformation. Inasmuch as no site has been found showing a stratigraphic sequence, the question of chronology must remain open.

An Analytical System for East Texas Pottery

Alex D. Krieger

The following notes are the outcome of some experimentation which I have carried out during the past six months at the Austin Archaeological Laboratory. More than anything else, they represent an effort at more detailed analysis of East Texas pottery complexes than has been attempted before. The field is unquestionably related to the general Lower Mississippi and Southeastern areas, but I am not aware that any objective ways of demonstrating ways and degrees of relationships exist either between the East Texas sites themselves or between these and complexes known in neighboring states. There can be little doubt that the East Texas field included a number of diffusion peripheries which, when defined, will contribute valuable perspectives to the surrounding fields.

My main reservation in not using the Southeastern system until the East Texas field is on a better foundation would be that its "types" appear to be too inclusive and temporal and geographical distributions are not known. For example, the BELDEAU INCISED ware is stated to include several rim forms, also several vessel shapes and variations in the design. No doubt one can feel safe in massing specimens under such groupings when one has worked with them long enough, but the whole process appears to me to require a long intimacy with the materials from wide areas.

For analyzing East Texas collections I have experimented with a form similar to one used by Griffin in his Norris Basin analysis. The principle behind it is that complete itemization of features at each site in any given area should precede attempts to determine "types". Features are checked under separate headings in different columns so that it is possible to see just what specific combinations of shape, design, design area, thickness, temper, color, finish, polish, appendages, etc., occurred on individual vessels, or small groups of very similar vessels, within each site. This is done by dividing both vessels and sherds into "lots". The sherds, either designed or plain, which cannot be correlated with definite vessel shapes, are first separated from those that can. The first group is set aside temporarily, and the second repeatedly subdivided in the following order:

1) Into specific vessel shapes, with rim or lip subdivisions; the sherd grouping is usually open to some question unless there is at least one whole or restored sample of each shape in the site.

2) Into thick, coarse, unslipped ware; slipped ware, polished ware, and such groups.
3) Into temper groups in a general way, such as grit, coarse or flake shell, fine shell, limestone, fine soft paste, etc. This grouping is probably far from precise without microscopic and chemical analysis, but it is hoped these will be supplied in time.
4) Into design groups, based on design mechanics (e.g., incised, pinched, brushed, etc.). Undesigned vessels form a group here.
5) Into design patterns, of which there are four major classes:
   a. Simple linear patterns.
   b. Simple geometric patterns.
   c. Modeled and applique features.
   d. Compounds of the above.
6) Into design-zone groups, as follows:
   a. Upper portion only (wall, neck, compound shoulder, etc.).
   b. On body.
   c. Over all, or nearly so.
   d. Lip design (distinct from lip molding, tabbing, etc.).
   e. Interior designs.

Of course there may be many questions and arguments about the sense of this sequence, and I am not at all sure it is the most desirable that can be devised. Nonetheless, under the system of splitting into "lots", each of which contains only a small number of sherds or vessels with only obviously minor differences between them, the order in which their features can be tabulated is unlimited. The lot numbers do not have to remain in sequence, and the combinations of features occurring in the same lots can be shifted up and down the sheet or rearranged horizontally by columns in any way desired. More important: by tracing feature combinations across the sheet, it is possible to draw up almost endless series of statistics on (1) the way single features combine with one another on individual vessels, (2) the relative frequency with which any combination occurs, and (3) similar calculations based on groups of traits rather than single ones.

Such sheets provide ready means of comparing any two or more collections with great objectivity. This applies equally well to single traits and to combinations. Master charts may be made up for several sites together by entering the lots for each and arranging them successively, so that one may follow up combinations of columns through the given sites. There is of course a limit to the number of sites that can be treated thus, for the separate traits from each of them would soon extend to too great length on a sheet. Perforce, those collections which clearly resemble one another would lend themselves best to such multiple charts.

Perhaps a valid criticism of the typological system now employed in the Southeast is that it is practically impossible to adapt it to frequent tabulations or to coefficient statistics. In attempting to judge the degree of similarity or dissimilarity between a series of sites, in the manners discussed by Professor Kroeber in the July American Antiquity, it is highly desirable to break down culture traits — that is, definite habits and practices — into descriptive units between which there is little if any choice in "importance". Opponents of statistical methods in anthropology usually allude to

the unequal importance of different so-called "culture traits". Having heard Kroeber propound the subject on several occasions, I am convinced that the difficulties center in (1) abuse of the term "culture trait" and (2) failure of field workers to prearrange their data for statistical treatment. When critics speak of the unequal importance of various practices, they confuse whole complexes with separate trait entities. A dance cannot be given equal weight with a projectile point style, nor with the practice of horticulture, obviously, because it contains many more traits than the first, and many fewer than the second. When, however, cultural practices are broken down--itemized--into the smallest sensible descriptive units, their treatment is not only purposeful but may be the only means of avoiding vague generalities about the relationships between various sites.

To test the points discussed herein, I have worked over three of our largest East Texas sherd collections; A.C. Saunders, Anderson County, 9,500 sherds; Davis, Cherokee County, 14,000 sherds; T. M. Sanders, Lamar County on the Red River, 4,500 sherds, and about 40 complete and restored vessels. The most instructive thing that developed was the way in which designs embodying the same principles were applied to very differently shaped vessels in each site. Conversely, similarly shaped vessels bear quite different types of designs. At the Saunders site, for example, a form of carinated bowl has a high, vertical upper wall, always decorated, and always with incised border line under the rim and along the shoulder. The design consists of concentric arcs in various positions. At the Davis place the same basic shape appears, but the wall is always lower than at Saunders, has border lines if the design consists of geometric figures (triangles and double triangles joined at apices), does not have border lines if design consists of very fine parallel incised lines and sunken triangles. At the Sanders Place the carinated bowl again appears with a straight side, low as at Davis, but undecorated in about 30 per cent of the specimens; in the remainder the design consists of oblique parallel lines or a fairly complex design of long inclined lines with graded circles filling the space between the incline and upper and lower borders. To take another example, punctate designs appear only on necks of recurved pots at Saunders, on carinated bowls at Davis, on deep, straight-walled pots at Sanders.

The point is this: shapes and designs seem to have had separate diffusions, at least in some cases, with repeated local adaptations involving "resident" and "intrusive" ideas.

Turning again to the determination of a type, it is my contention that a "type" is invalid unless the same specific combination of traits occurs in two or more sites. This does not interfere with such terms as "design type" or "vessel type", taken separately, where these can be shown to hold their uniformity over an appreciable area. But a pottery type should be a combination of form and design principles (and perhaps some supplementary features) which hold together in diffusion.

In conclusion, may I state that I have no particular convictions about which systems will apply best to East Texas, but have taken the position of extreme detail in order to build up greater assurance among other things, regarding just what the traits are that we have to deal with. With another year of work, definite results should appear.

The Use of Classification in Haiti

Irving Rouse

The procedure of classification was used three ways in the Haitian study. It was applied to the artifacts, to the features of the artifacts, and to the sites. The artifacts were classified to form types, or kinds of artifacts. The features of the artifacts were classified to form modes, or kinds of features. The sites were classified primarily in terms of the types and modes to form aspects, phases, and patterns, or kinds of culture.

The latter three categories conformed to the larger units in the midwestern taxonomic system of classification. It was not considered advisable to form components and phases, the two smallest units in this system, because none of the sites had been excavated thoroughly enough for classification below the level of aspects. It is probable, however, that most of the sites would have been single components, since each is relatively homogeneous in culture.

After the types, modes, aspects, phases, and patterns had been formulated, their distributions were traced in time and space. This provided a reconstruction of the prehistory of the Ft. Liberte region, Haiti, where the work was done. The diffusion and persistence of the types and aspects constituted the basic part of the reconstruction. Minor details were expressed in terms of the history of the modes and general trends in terms of the history of the phases and patterns.

Classification in the Southeast

C. H. Fairbanks

Archaeological investigation in the Southeastern area has been greatly expanded under various governmental agencies during the last ten years. This has resulted in the accumulation of a considerable body of new information and the systemization of facts from earlier workers. The conditions of governmental participation have resulted in a concentration on certain localities with only a few regional surveys. In most of the localities chronologies have been built up and, through the Southeastern Archaeological Conference these chronological series have been cross-dated. The presence of adequate stratigraphic situations has encouraged most workers to concentrate on a chronological problem. They have generally used the classic method known as the historical approach. Little work has been done of a taxonomic nature. This paper will attempt to show the value of this approach in conjunction with established chronologies.

We may assume that all agree in treating taxonomy and chronology only as methods of ordering facts in order to discover the cultural process operating in the past. Chronology and taxonomy are by no means the end results of archaeology. Chronology arranges the facts in a time scale. The McKern classification may be regarded as arranging facts in a relational scale.

All archaeologists seem to be agreed that chronological pictures are vitally important. The value of classification lies in the added system it imposes upon chronological studies. Tie-ups with historical groups are frequently lacking and in other cases are of doubtful value. The fact that historic-ethnological classifications are based upon linguistic and socio-political groupings makes their application to strictly prehistoric levels extremely precarious.

The culture area concept, so useful in ethnology, does not seem to yield valid results when a time scale is taken into consideration. The archaeologist is faced with the problem of dealing with groups having no historic connections. In these cases it is imperative to depend upon those materials which are actually available and disregard certain linguistic and socio-political assumptions which are inferential in nature. There are always localities or occupations which do not fit into a chronological scale. Within a given area the relative chronological position of a given grouping may change from various causes. Thus, in many cases the archaeologist is forced to depend upon taxonomy.

Even where a well established chronology is present it is usually desirable to use the techniques of classification to delimit or crystallize the various complexes. Given a series of sites of the same relative age, the only method for determining characteristic traits or determinates is by application of a classification to the materials themselves. In comparisons of one local area with another taxonomy will indicate the regional variations. "Classification is nothing more than the process of recognizing classes, each class identified by a complex of characteristics." (McKern) We see no reason why this method cannot be applied to the complexes of a chronological system. In other words; why not use taxonomy to more accurately define the complexes or stages of a chronology.

McKern says that in an objective taxonomy the archaeologist must disregard space and time factors. This would seem to preclude the application of taxonomy where a chronology is present. However, while a combined objective classification and time classification is confusing, it would seem desirable to apply the techniques of McKern to time scales. This would result in more precisely defined stages and in greater ease of comparison. After all, it is valuable to indicate the degree of relationship within a single period of a number of sites or even local areas. This quality of relationship cannot be accurately stated on the basis of developmental systems such as commonly grow out of chronology.

Ritchie, working with the chronology established by Parker in the first quarter of this century, has applied the McKern system of nomenclature to chronological periods. This is actually something quite different from the goal of the Middle Western archaeologists. He has simply applied a terminology more in agreement with modern theory. It is difficult to estimate the amount of trait comparison actually done. Conversations would indicate, however, that he has done a fair amount of comparison. He certainly has organized his material traits in a systematic fashion as Webb's use of his archaic trait list proves. He had, of course, the firm foundation of Parker's trait listing and frequency counts to build on. At any rate this is one solution of the problem of an established chronology versus McKernism.

Eric Reed, of the National Park Service, has outlined a "thematic classification" which seems to be a modified McKern terminology. It employs five Themes which are the Bases of the other school. They are:

1. Early Man in America.
2. Early Food Gatherers.
3. Transitional Food Gatherers and Nomads to Sedentary Agricultural.
4. Prehistoric Sedentary Agriculturists.
5. Historic Sedentary Agriculturists.

All themes, especially four and five, introduce a time factor to the objective material taxonomy. This seems to be based entirely upon chronological position and not on the presence of European objects which would not in themselves necessitate a separation. Themes four and five are divided into the conventional Woodland, Mississippi Plains, and Southwestern Patterns. This system has been used by the National Park Service in the Archaeologic Sites Survey and opinions as to its effectiveness may be expected in the near future.

An examination of these various classificatory systems reveals a number of interesting points. Kroeber's statistical techniques are only in themselves, a classification. The application of terms from the McKern system to existing chronological periods is only valuable when actual trait comparisons are made and the existing classes checked by that means. The McKern nomenclature is valueless in itself. The third alternative is to compare Components or communities by means of complete trait lists and set up foci, aspects, phases, and patterns. These may then be correlated with the chronological chart. The advantage of trait comparisons to determine the sites representing a focus is manifold. The first is the isolation of distinctive groupings. These form the basis of any cultural study, whether temporal or spacial. Trait comparison is the only method of demonstrating the homogeneity of classes and offers the most reliable technique for measuring degree of variation. In addition it enables other workers to check published with unpublished material. The second aspect of this taxonomy is the isolation of determinants in any specific comparison. For understanding the processes of culture change these traits are of vital importance as they indicate sources of change and special lines of development. Linked traits, to use Ritchie's terminology, also indicate cultural relationships of supreme importance.

Lastly it is recognized that chronology is a more primary tool than taxonomy for culture history. But taxonomy, by imposing a systematic order on the science is equally able to indicate the significance of material traits. In that it rests on consideration of all the traits it is able to isolate significant elements with great precision. Archaeology existed for so long a period without a taxonomy that there is little danger of professional taxonomists arising in the science at this date. More real is the danger that students will neglect a valuable method in favor of traditional forms.

The listing of traits by complexes as suggested by Cole and Deuel seems to have considerable pragmatic value. The complexes seem to move, in certain instances, rather than isolated traits. It should be possible to record correlations for each complex, although the weighing of complexes (after Deuel) does not seem to work out very well. Kroeber in his listing of trait elements seems to be striking at something of the complex idea. A series of complexes has been used at Ocmulgee with some success.

Food Gathering Activity
Agricultural complex
Collecting complex
Hunting and Fishing complex

Architectural Activity
    Village Location and Plan complex
    Structures complex
Ceremonial Activity
    Burial complex
Dress and Ornament Activity
    Dress complex
    Ornament complex
Industrial and Artistic Activity
    Pottery complex
    Rough Stone complex
    Chipped Stone complex
    Ground Stone complex
    Bone complex
    Shell complex
    Metals complex
    Fibres complex
    Wood complex
    Art Motif complex
    Trade complex

Military Activity

Physical type can be added but must be used as with extreme caution, if at all. In a number of cases it is found that trait lists arranged in this fashion will present facts otherwise obscure. The configuration of the various complexes is of interest in reconstructing the history of a group.

It is suggested that taxonomy will work to the best advantage from the bottom up. Foci can be set up wherever a series of sites have been excavated. As more and more is done it will be possible to build up Aspects and Phases. At any stage it is preferable to indicate the relationships of a focus with another focus, or an aspect with another aspect. The alternative of placing a new focus in a pattern without indicating aspect or phase has only a questionable value.

Excavations at Kincaid
John Bennett

The excavation of the Kincaid site was begun in 1934, and has continued each summer field season since, the work being almost entirely accomplished by student crews. The past two summers a small WPA force was made available, and the work has been correspondingly more rapid.

As a consequence of more intensified excavation in 1939 and 1940, problems existing at the site have been greatly clarified, and a more unified program of exploration has been made possible. The statement that follows can be considered as a summary of the essential features of the three horizons as they now stand, with special emphasis on their possible relations to the north and south.

The Woodland I horizon is represented by two components: Baumer and Avery Lake. The former, and larger of the two, is located on a slough five miles down the Ohio from Kincaid proper, while the second is found directly below the Kincaid Middle Mississippi component on the banks of Avery slough. Culturally the two

are identical, although the Avery Lake component has been only incidentally excavated at several points during explorations for Kincaid villages and palisades.

The Baumer component lies on a slight ridge about 500 feet long and 250 feet wide; the extent of cultural debris indicating the entire ridge was under occupation. A trait list follows:

Sixty per cent of the pottery is composed of a flaited fabric-impressed ware most of which occurs in this major vessel form; flat base, flaring sides, slightly incurving rim - highly reminiscent of a European "bell-beaker". No tetrapod or conoidal bases are presen Tempering is rather complex: the large majority is composed of white, powdery clay particles that leach to produce the characteristic pitting; small hard gray to buff clay pellets occurring frequently; and rare small water-smoothed pebbles. About twenty per cent of the entire ceramic complex shows the presence of sand in varying quantities, ranging from a small amount to a complete dominance of the aplastic material - sherds of the latter type contain few or no clay particles, and so can be considered sand-tempered. This sand is really the result of using an unrefined ball-clay.

Besides the fabric-impressed, here occurs 20 per cent of Plain ware, apparently appearing in the same major vessel form. Next comes 10 per cent of cord-marked in several subtypes, all of which are variants from a basic cord-wrapped-paddle-impressed technique, and which also occur in the "bell-beaker" form.

The final 10 per cent of the series is composed of miscellaneou cord-marked and punched rimsherds, all very different from anything else in the series, and displaying an influence probably foreign to the southeast. Folded-over rims, with alternate bands of parallel cord-marking, diagonal cord-marking on the upper rim bordered by longitudinal cord impressions below, cross-hatching with small cords bordered by punctates below, and other variations of these basic elements. With the exception of the last, strikingly similar sherds appear in Wisconsin Woodland. A few body sherds show zone decorations made of cord impressions.

Other Traits:

LITHIC

Projectile points: General Woodland types. (1)a contracting-stemmed type with broad triangular blade somewhat reminiscent of Hopewell types. (2)Straight-stemmed type. (3)A pseudo-Folsom type, with a flat or slightly concave base, slight concavity above base, and ogival blade form. Several of these show an incipient central fluting.

Large flake scrapers: double-convex and plano-convex.
Large blades.
Pitted lap-stones.
Thick ovoid celt.
Small, thick full-groove axe.
Concave-sided slate gorget, double perforation.
Rectangular concretion and slate gorgets, perforated.
Ovoid slate gorget, perforated.
Plummet stone.

HOUSE COMPLEX

Square houses, postholes around periphery, few interior supports.
Close together, walls parallel.

Trash pits: (1) Cylindrical, narrow and deep. (2)Jar-shaped, shallow.

Roasting pits: lined with burned clay, full of coals and bones.

BURIALS

The few indications were in refuse, and only small fragments of bone were obtained. No clue as to type.

MISCELLANEOUS

Lumps of unworked galena, all sizes.

Cannel coal fragments.

Hematite fragments.

This Woodland I, or "Baumer" culture occurs directly below the Mississippi components at all places in the region, except where the Woodland II, or "Lewis" horizon intervenes. A ware related to Baumer appears in the same position in the Carbondale area, farther north. But in the Carbondale region the Baumeroid material is preceded by a thick cord-wrapped-paddle impressed type.

Baumer is a member of the widespread fabric-impressed pottery horizon that extends down the Atlantic coast from the northeast, through the south and up into the Dakotas. Its associations with Adena-like material are strongly suggested by chronological and cultural similarities - at any rate a Hopewellian strain of some kind is suggested by the cord-cross-hatched rims with basal punctates, flat bases, galena lumps, projectile points, etc.

Culturally it seems to tie in with the Limestone horizons in Pickwick, Wheeler and Guntersville Basins, the Adena complex, and possibly Copena. Chronologically, a tie can be seen with the simple and check-stamped wares in Georgia, and the Troyville types in Louisiana. A single trade sherd has been found; one which seems to agree in all characteristics with Alexander Pinched, which although in a lower time level, need not necessarily date Baumer.

Baumer material is found pure at the Baumer component, but is mixed with some Lewis at the Avery Lake component, and is present in a minority mixture with Lewis at a Lewis village site; both in trash pits as well as surface refuse. The significance of this for relative chronology will be taken up later.

The Woodland II horizon is represented meagerly and somewhat quizzically at Kincaid. It is mixed with Baumer as indicated above; it is mixed with Kincaid Mississippi sherds in a burial mound, as a result of the Kincaid peoples using Lewis refuse to cover their stone-box graves. Its intermediate position is clear, but how far it overlapped into both Kincaid and (especially) Baumer is a matter for further determination.

Lewis pottery is thin, cord-wrapped-paddle-impressed, and occurs in round-bottom, straight to slightly flaring sided vessels, with crenellated and plain lips. The tempering is small buff clay particles with occasional inclusions of water-smoothed pebbles. A small percentage of plain ware occurs, also a few sherds of crude incising on plain; and finally some rare broad-line trailing over cord-wrapped-paddle, superficially very like Black Sand pottery.

A single classic Hopewell rimsherd has been found in the top level of a Lewis trash pit.

The lithic complex is imperfectly known; a single type of point, with a long triangular blade and contracting stem, notched. The three specimens found thus far are made of jasper, whereas the Baumer artifacts are either rhyolite or gray chert. A single long

expanded-base drill has been found. Other traits are shallow, round trash pits; an irregular rectangular house with side entrance, open corners, and wall trenches - a sort of degenerate Mississippi type.

The picture is admittedly incomplete, but all indications point to a group that remained in the area for a short time, with little distinctive material culture save pottery, and who were able to exist peacefully with the Baumer group for a short time during the final stages of the Baumer occupation. Whether or not there was an overlap into the Kincaid occupation is at present answerable in the negative, unless the vaguely Mississippi house type be considered as evidence.

Culturally, and in terms of a relative ceramic chronology, Lewis seems to correspond to the Clay-grit horizon in Pickwick and Wheeler Basins, the Savannah Fine Cord-Marked types in Georgia, perhaps the Deasonville period in Louisiana. The early Middle Mississippi at Macon and in the Norris Basin may also be roughly coeval. A thin cord-marked ware like Lewis also appears at Carbondale, in a similar position.

The significance of an overlap between Baumer and Lewis is plain: it may mean that the fabric-impressed horizon in southern Illinois occurs there at a slightly later time than elsewhere in the southeast. (The overlap in the Carbondale region is even more striking. In addition the small series of cord-marked types in Baumer that are so similar to Wisconsin Woodland again suggest a later date, since the closest analogues appear in the variety that seems to have blended with Middle Mississippi at Aztalan.) The flat base, so distinctive of Baumer, gets rarer as we go north to Carbondale, where a conoidal bottom has nearly totally supplanted it. All the facts, inconclusive as they are, point to a fabric-impressed ware appearing in southern Illinois as a later intrusion, bearing out the theory of a migration up the Tennessee Valley in the Ohio.

Trailing over cord-marking and crenulated lips in Lewis again suggests a northern influence of some sort. Whether or not Lewis is later than its southeastern relatives cannot be guessed. It did not overlap into Kincaid as far as we can determine at present.

The Mississippi components at Kincaid consist of the large Kincaid site itself, a stone-box-grave burial mound, and numerous small village sites scattered over the surrounding fields. The culture is too well-known to discuss in detail, but excavations of the past two years have produced some noteworthy features: The large truncated mound with the offset conical at one end has been found to have at least three stages of construction, the conical being the final. The fortification has a straight rear wall with bastions running for 2000 feet; a palisade along the slough bank. The two sides are as yet unlocated. Sequence within the component is as yet vague, save for a possible clue acquired this past season: Mississippi houses built directly upon the Baumer level display small narrow wall trenches, with numerous small posts. The later structures are larger, rectangular, with wide, deep trenches and numerous secondary supports. Sherds obtained from the Baumer level trenches this past summer will be analyzed in the laboratory this year. A superficial study revealed no difference from the typical Kincaid pottery, however.

The Kincaid site is probably the largest and most elaborate of the so-called Tennessee-Cumberland Aspect type. In connection with

its study, we are carrying on a preliminary analysis and focal breakdown of Tennessee-Cumberland material. At this point, a few general remarks can be made: Kincaid, Angel, Wyckliff, and related small sites on the north bank of the Ohio seem to constitute one focus; Tolu, Duncan, Williams, the upper component at Page, McLeod Bluff and others south of the river may group into another focus; the sites in the Norris Basin and elsewhere on the Tennessee basins have not been worked on sufficiently to hazard placement as yet.

The similarities with Angel are unusually great. Out of a total of 98 traits, the two sites have 86 in common. The 12-odd differences are present as elaborations of basic Mississippi traits, accountable as local variations.

Kincaid was coeval with Cahokia, since numerous trade sherds from that site are found. Painted ware and white polished sherds suggest an Arkansas Homeland. Traits such as incised guilloches on vessel shoulders, stone-box graves, and a single Upper Mississippi type cannon bone beamer suggest influence coming down the river from southwestern Ohio.

The Central Mississippi Valley Archaeological Survey
James B. Griffin

I Introduction

The Central Mississippi Valley Archaeological Survey was organised by James A. Ford. The personnel of the Survey consisted of Ford representing Louisiana State University, Dr. James B. Griffin representing the Ceramic Repository for the Eastern United States at the University of Michigan and Dr. Philip Phillips of Harvard University. The fourth institution to cooperate in the survey was the National Park Service. The purposes of the expedition were to attempt to bridge the archaeological gap between the southern Illinois area and the Lower Mississippi Valley, carry out research on the connections between Marksville and Hopewellian, find the origin of Middle Mississippi, and discover further evidence of the move of traits up the Mississippi Valley.

II. Physiography & Area Covered

Coastal Plain Province

Mississippi Alluvial Plain and Embayment

A broad deep structural trough with the River flowing down the axis. Bordered by Appalachian uplift on the east and Ozark & Ouachita highlands on west Main stream is now aggrading or building up its channel and adjacent floor plain.

Crowley's Ridge, a maturely dissected remnant of the higher, nearly level plain in which the present alluvial trough was narved. About 200 miles long and clearly defined by steep lateral parallel slopes. Three miles wide and 150 feet high at south and 12 miles wide and 250 feet high in north. Approximately bisects the alluvial plain. At one time during the last great excavation of this trough the Mississippi flowed west of Crowley's Ridge and the Ohio on the east. Successive breaks now occupied by St. Francis and Little River.

Yazoo Basin. Yazoo River gathers the water from the east sloping banks of the Mississippi and would run to sea if not intercepted by the main river at Vicksburg.
St. Francis almost the counterpart of the Yazoo. It is intercepted by the Mississippi at Helena.
Arkansas and White flowing from the Interior Highlands set it a channel open to the Mississippi, Arkansas parallel by streams of the Yazoo type.

III. Cultural Groups
A. Baytown
1. General characters (a) relatively small sites. Groups of small dome shaped mounds. Little evidence of stone, bone or shell artifacts, stemmed points when found. Clay tempered pottery with cord marked or plain surface. Sometimes on abandoned river channels or extinct natural levees Something less than half are without M.M. material to any degree. (b)Some sites have a large group of dome shaped mounds and these are in close geographical association with pyramidal mounds arranged in a square. At least two sites of the type of mound arrangement had only Baytown material primarily of the plain surface type.

B. Middle Mississippi
a.Lower Arkansas & Helena Area
1. Sites near Menard, Avenue, etc. Conical Mound at Menard surrounded by small mounds. Mounds - perhaps house remains at Wallace. Avenue had flat topped structures.

b.St. Francis Type of Sites.
Large rectangular to square. "Mound" or occupied area. Large flat topped mound on west and smaller one opposite on east. Some other mounds on sides where greatest depth richness of debris.

c.Bradley - Nodena - Pecan Point.
Large flat topped mounds. Large cemetery areas.

IV. Pottery Groups
A. Baytown-clay tempered.
Mulberry Creek Cord Marked or Deasonville & Baytown Plain - Larto Red Filmed.
Wheeler Check Stamp) Considerable variation within these
Fabric Impressed) two types in shape, and rim and lip
Phillips Punctated treatment. Also found are sherds strongly suggestive of Marksville, Troyville, and Coles Creek Horizons--some undoubtedly trade. No sites which are representative of these three cultural foci.
Bowie Site & relatives - Distinctive color and sandy feel. Suggestion of the Adena rim and strong Hopewell Marksville connections in pottery decoration.

B. Sand tempered 10-2-3 (?)
Relatively few sites. Plain-cord marked. Fabric impressed.

C. Nickle & Bell Plain which are fine clay & fine shell respectively.
1.Shapes-Bowls-Flaring rim plates, wide mouth bottles-effigy forms.
2.Related pointed types are a clay Red-on-buff and Polychrome and a shell Red-on-buff and Polychrome. Hull engraved a flaring rim plate. Zone engraved.

3. Area - somewhat restricted to Mississippi River area & sites like Bradley, Nodeman, etc.

D. Lower Arkansas Wallace Incised-Shell tempered.
1. Shapes. Jars with flaring & angled rims. (Burials with vertical and flaring rims).

E. St. Francis Types Assemblage
1. St. Francis Plain
2. Barton Incised
3. Parkin Punctated
4. Turnbow Punctate Incised
5. Ranch Incised
6. Castile Linear Punctated
7. Tyronza Punctated
8. Fortune Noded
9. Pouncey Pinched
10. Manley Punctated
11. Kent Incised
12. Vernon Paul Applique.

Shapes - 2 to 12 are on jars. Others are bowls of a number of shapes - plates rare and a close approach to a pan.

F. Owens Punctated
Rhodes Incised
Turnbow Incised.

V Chronology
A. Based on typology and time relations in other areas and a comparative analysis of trait associations in the area surveyed.
B. A Baytown occupation coexistent with a Marksville-Hopewellian level.
C. A Baytown occupation coexistent with a Troyville-Coles Creek level.
D. A Middle Mississippi coexistent with a late Coles Creek & Plaquemine period.
E. Definite suggestions in form of development of the village and mound arrangement and to some degree of pottery of progressive development from the Baytown into the Middle Mississippi period.
F. Absence in survey area of M.M. cultural assemblages thought to possess relative antiquity such as Norris Basin small log town house complex - also found at Macon.
Old Village & Aztalan type material.
G. St. Francis and Wallace material probably coeval with late mound, late T.C., late Fort Ancient, Harrington's Cherokee-middle Caddoan.

VI. Summary.

The Archaeology of the Natchez Trace Parkway

Jesse D. Jennings

The Natchez Trace Parkway is one of two Federal Parkways now under construction. The Trace commemorates the early Post Road of 1801, which connected the settlements of Nashville in Tennessee with the then newly acquired Natchez district in Southwest Mississippi. The Natchez Trace Parkway will be a scenic and recreational highway primarily for pleasure traffic.

Since the original Trace cut across the tribal lands of the Chickasaw and Choctaw, these groups played a fairly important role in the early history of the road. The tribes are therefore an intimate part of the background for the present Parkway, and will assume an important position in any interpretive program eventually presented to users of the motor road. Recognition by the National Park Service of the need for authentic Indian background material in addition to that from recent tribes resulted in the initiation of the Natchez Trace Parkway Archaeological Survey. The primary objective of the Survey is the preparation of an archaeological site inventory, such as prepared by the usual surface survey. It is hoped that excavation and synthesis of data will follow the Survey.

The Survey has functioned intermittently since January 1,1940. Material has been collected from four maker areas.

In the Adena area (vicinity of Natchez, Mississippi) historic Natchez and Coles Creek material predominated. In the Madison area (Central Mississippi) Deasonville and historic Choctaw remains were strongest.

Going north to the Lee area in northeast Mississippi a proto historic Chickasaw and an earlier cord-marked horizon similar to Deasonville were delineated. The occurrence of fibre-tempered sherds, and plain plaited fabric impressed sherds led to the supposition that an extended chronology may eventually be set up in the Lee Area. Another complex is found in the Maury area (near Columbia, Tennessee) where the shell tempered Middle Mississippi or Tennessee Cumberland wares occur in conjunction with stone box graves.

South of the Maury area is the Wayne area, a district where no pottery has even been reported, but where flint debris, associated with periwinkle shell middens is abundant. This last area only slightly sampled by C. B. Moore can be regarded as a bonafide culture area, probably restricted to the hill country of Tennessee and northern Alabama. Typologically the flint artifacts are correlated with the shell mound remains along the Tennessee River in northern Alabama.

The least known of the zones sampled is the Lee Area. The evidence points to an early horizon (cord marked material) which correlates with the sand-tempered horizon of the Guntersville Basin. It is also very similar to the pottery reported from the Gulf Coast and Tombigbee River. There is evidence that the cultural forebearers of the historic tribes, Chickasaw, Choctaw and Natchez also lie to the Southeast.

A preliminary report of the survey findings has been made for Natchez Parkway Survey files.

A Burial Site in Lamar County, Texas showing Possible Middle Mississippi Valley and Plains Influences.

A. T. Jackson

The T. M. Sanders site, Lamar County, Texas, is on a small stream one mile from its confluence with Red River, about 125 miles up the latter stream from Texarkana.

The site, consisting of two large mounds and an adjacent village, is located along an old stream terrace at an elevation of some 500 feet above sea level. The site is in a marginal area between the western extension of the Mississippi Valley and the eastern extension of the Plains cultures.

The materials reported on in this paper were secured from one of the mounds excavated by the Anthropology Department of the University of Texas in the summer of 1931.

Burial Data

At this site were found 21 graves that contained the skeletons of 60 individuals. A few graves contained as many as six or eight skeletons. Most of the skeletal material was in a good state of preservation. All graves exhumed by the University of Texas were in an extended position, although a few flexed burials have been reported from this and adjacent sites. It was noticeable that the deep graves usually contained more skeletons and offerings than did the shallow ones. Seventy-six per cent of the burials were oriented with the head to the east.

A number of the graves contained ash deposits, but in no case did the bones show trace of fire.

As mentioned in the paper by Dr. M. S. Goldstein, a number of skulls were artificially deformed.

Another feature of interest was the grouping of the pottery vessels well back of the head. This practice of placing the vessels sometimes as much as two feet from the skull necessitated the digging of longer graves.

Evidence Pertaining to Structures

A few square and rectangular structures were found. These were small, with dimensions of about 12 by 14 feet. In one case postholes were present on only three sides of the structure.

The Material Culture

The pottery accompanying the burials was outstanding in several respects. A large percentage of the vessels were of redware. There were present a number of vessels with shapes unusual in the northeast Texas area. Among these might be mentioned a tripartite bottle of redware and large redware bowls with scalloped rims.

Another outstanding feature was the quantity and excellence of the shell work. Twenty gorgets, made from conch shell (Fulgur perversum), were present in the graves. Some of these were artistically carved, representing the human head, a turkey cock, sun symbols, etc.

There were several large conch shell containers, a few carved and perforated. There was evidence of copper stains on some of these shells.

Some seven thousand beads, of various sizes, made from the columella of the conch shell, were in the graves. There also were some pearl beads, and a few of bone and clay.

Among the bone artifacts may be mentioned buffalo scapula digging implements that suggest Plains influence. Most of these specimens were perforated for attachment of handles. Copper stain appeared on one side of a number of the specimens. Bone awls and pressure flaking tools were present.

Included in the stone work were metates and manos, polished stone celts, and chipped double-bitted axes. Two stone earplugs had a copper covering over one surface. Many small "snub-nose" end scrapers and a few beveled four-edged knives were found.

Among the projectile points were those of various sizes and shapes, ranging from the large, lozenge-shaped points to small, thin triangular points. All points found in graves were of the small stemmed variety, while the large projectile points and the

small triangular ones were confined to the surface and midden deposits.

Ten earthenware and stone pipes of the elbow type were present in the graves. There were no effigy pipes.

Different From Other East Texas Sites

This is the only known East Texas site containing numbers of group burials. Most of the pottery is unlike the so-called Caddo ware common in much of the East Texas Region.

There are more specimens made of shell and more excellent workmanship of gorgets than found elsewhere in Texas.

The house sites are unlike the round ones common in the Caddo region of East Texas.

Tentative Conclusions

The materials from this site may belong to the late prehistoric period.

There seem to be cultural contacts from the Middle Mississippi Valley and from the Plains areas.

Archaeology of Northwest Louisiana

C. H. Webb

Culture sequences in the Red River Valley of Northwest Louisiana, the historic center of the Caddo Confederation, have not been well delineated. Excavation of a stratified domiciliary mound at Belcher, Caddo Parish, revealed evidences of two distinct subcultures with progressive shifting from plainer to more advanced pottery types in the four successive habitation levels.

On the premound surface, there was a rectangular house outlined by post molds extending through wall trenches. A 7-foot entrance way projected N.E. Through the covered debris (burned daub, cane and grass roofing, timbers, etc.) of this structure had been dug, two burial pits, containing 4 and 5 skeletons, with scant pottery placements above the heads. Vessels and sherds from this deepest level included undecorated water bottles, thick bowls and pots, featuring incised parallel lines, chevrons and punctuates, with notched rims.

The first small mound covering this debris had the post mold outline of an oval structure whose features were obscured by intrusive burial pits from above. Sherds included types already mentioned, and also the later type of pottery found on levels one and two.

On the two top levels, at heights of 5-1/2 and 8 feet from the original premound surface post molds outlines 30-foot circular structure, with a 7-foot entrance projecting N.E. from House 2. House 1 on the top surface lacked a projecting entranceway. Each of these structures had an inner circle of grouped posts, apparently 8 groups for each, midway between the outer circle and a central ashbed. Charred fragments indicated that wattle and daub walls and woven cane-grass thatch roofing were features of house construction.

Ten burial pits originating in the two top levels contained one to three skeletons each, with abundant pottery and shell furnishings placed all around and over the burials. Burial pottery and sherd collections from these levels showed preponderance of firm, thin, shell tempered wares with curvilinear design, often engraved after firing. Red or yellow surface slips and red or white pigment impressed into the designs occurred frequently. Vessel shapes included bottles, carinated and flat bowls, vases, pots and cups.

Other culture elements common to all levels, included bone tools, miniature points, sandstone hones and small pottery pipes. Animal and fish bones were present in abundance on all levels, and charred corn cobs, beans, persimmons and nuts appeared on the two top levels, as did small shell hoes.

In summary, we have evidence of two similar but distinct Caddoan subcultures, with progressive changes in house types, improvement in pottery technique and abundance, with introduction of shell ornamentation and increase in agricultural pursuits in the later periods of occupation.

A Brief Review of Columbia University-National Park Service, Archaeological Survey in West Florida, 1940

Gordon R. Willey and R. B. Woodbury

During the summer of 1940, Columbia University and the National Park Service conducted an Archaeological Survey of West Florida. The work was carried out by Gordon R. Willey and R. B. Woodbury, both students in the Department of Anthropology, Columbia University. A total of 79 sites were mapped and recorded and surface collections of artifacts were made from all sites. The area covered was the Gulf Coast between Pensacola Bay on the west and St. Marks Bay on the east. In addition to this coastal strip a number of sites were located in Leon and Jefferson counties, inland from St. Marks Bay.

Six of the surveyed sites were excavated. These were chosen for their promise of stratigraphy and their geological position. From east to west they are the Lake Jackson site in Leon County; the Mound Field site in Wakulla County; the Carrabelle site in Franklin County; the Sowell site in Bay county; the Fort Walton site in Okaloosa Vounty; and the Gulf Breeze site in Santa Rosa County. Material and data recovered from all sites indicates important temporal and spatial variations.

Briefly the aims and results of the survey can be summed up as follows: The early work of Moore and Holmes indicated two types of mound and associated burial complexes in West Florida; the small sand mortuary mound, and the larger pyramidal mound with intrusive burials in the summit or the surrounding village area. Stirling, more recently, has associated the Weedon Island ware or pottery complex with the former and the later Safety Harbour pottery complex with the latter. One of the most important problems confronting the survey was to expand the cultural picture by concentrating on the villabe areas related to the mounds. In addition, chronological and distributional factors were to be considered. Thus, the program of the survey was directed at the village refuse or shell middens found in association with the burial mounds originally excavated by Moore.

The results from this work show a chronology for the eastern part of our area which runs, from earliest to most recent, as follows; Deptford; Swift Creek; Early Weedon Island; Late Weedon Island; Fort Walton. This cultural horizon is unique in that it shows strong Middle Mississippi elements. Also its occurrence in the upper levels of three stratified sites suggests, on physical grounds, a break in the old cultural continuum. In the western part of the area, from St, Andrews Bay to Pensacola, the Deptford horizon was not found. The earliest level in the region, the Santa Rosa, is a mixture of Marksville and Swift Creek elements and is apparently coeval with both. With this exception

the eastern and western divisions are the same.

The relationships of these ceramic sequences with Georgia and Louisiana are obvious to those working in the southeastern area. It is the ultimate aim of the authors to refine these synchronizations and to attempt to fill out more completely the cultural patterns of the various periods in West Florida by combining present and future work with earlier published data.

Some Problems of the Glades Archaeological Area, Florida

John M. Goggin

The object of this paper is to define some of the more characteristic traits of the Glades Archaeological area dividing it into sub-areas where possible. The lack of even one carefully excavated site makes it impossible to apply the valuable technique of classification that has been developed by McKern and found to be of so much value in the Eastern United States.

The Glades area has been delimited by Stirling as including the "region between the Kissimmee and Indian Rivers and all the peninsula from Lake Okeechobee to the Florida Keys, inclusively."[1] To the northwest this area is bounded by the fairly well defined "Gulf Coast Area" which extends as far south as the Caloosahatchee River.[2] To the northeast is the poorly known stretch of the Atlantic seaboard that lies east of the St. John's river to its mouth.

Ceramically this area is characterized by two pottery wares. These are Glades Gritty[3] and Biscayne Chalky[4] wares. Associated with these are various rare minor wares which will be mentioned later. Glades Gritty is found through the whole area, Biscayne Chalky is found only along the east coast, south along the Keys at least as far as Upper Matecumbe Key. It is apparently found at Stirling's Belle Glade site, but its line of distribution runs south through the Everglades not far from the eastern edge. I have recently learned of one site on Onion Key at the mouth of Lossman's River, where Biscayne Chalky Ware occurs in some quantity. This seems to be the only site of its type on the western coast for at no other site (on the west coast) have I found a single stamped Biscayne Chalky shard among thousands studied. Outside of this one site where decorated shards are common, it is represented by only one plain shard from a site at the head of Turner's River.

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1. M. W. Stirling, "Florida Cultural Affiliations in Relation to Adjacent Areas", in Essays in Anthropology in Honor of A. L. Kroeber, Berkeley, 1936, page 355.
2. Ibid, page 355.
3. John M. Goggin, "A Ceramic Sequence in South Florida." New Mexico Anthropologist, Vol. 3, 1939, page 37.
4. John M. Goggin, "The Distribution of Pottery Wares in the Glades Archaeological Area, Florida", New Mexico Anthropologist, Vol. 4, 1940, page 40.

Throughout this area, occuring very rarely, occasional shards of shell tempered or mixed shell and sand tempered wares are found. No incised shards have been found as yet, but those of this type found at Gordon's Pass site were painted a "fugative red".[1] Another atypical ware found on the east coast is tempered with limestone. In small quantities (less than 1 per cent) it has been found at Miami Beach and on Key Largo. As yet, however, the occurrence of these above mentioned wares is too infrequent to be of any value as a cultural criterion.

By using pottery as a cultural criterion, the Calusa and the Tekesta sub-areas can be delineated. These sub-areas are further substantiated by various other archaeological traits; and using comparable other traits, another district, the Kissimmee-Eastern Okeechobee sub-area can be defined. The following table will present some diagnostic traits.

Sub Areas	Calusa	Kissimmee-Eastern Okeechobee	Tekesta
Glades Gritty Ware	+	+	+
Biscayne Chalky Ware	-	+?	+
Complicated Shell Works	+	-	-
Sand Ceremonial Mound (High East End Type	-	+	+
Stone Mounds	-	-	+
Midden Predominately Shell	+	-	-
Flat Topped Sand Mounds	+	+?	-
Canals	+	+	-?
Complicated Sand Works	-	+	-
Strong Artificial connection with northern areas	-	+	-
Abundant use of Shell celts	-	-?	+

The Calusa sub-area is roughly the area south of the Caloosahatchee River and west of a line drawn from Lake Okeechobee through the middle of the Everglades, south, including Cape Sable. This is all included in the former territory of the Calusa Indians.

The Tekesta sub-area includes all the area east of the middle of the Everglades; the Keys, at least as far south as Lower Matecumbe, and probably to Key West. To the north the limit can arbitrarily be drawn from Belle Glade to Palm Beach. This area was the main center of the Tekesta Indians.

The Kissimmee--Eastern Okeechobee sub-area includes the territory east of Lake Okeechobee, north of the Tekesta sub-area, the Kissimmee Valley and the Atlantic Seaboard, at least as far north as Fort Pierce. This section of the Glades area is the least known.[2]

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1. Rarely, Biscayne Chalky Ware is also painted a fugitive red.
2. In naming this sub-area a change was made in ethnologic to geographic terminology. The proper name for this area would be the Mayami sub-area, after the former Indian tribe. This unfortunately would probably be confused with the present city of Miami, which is now in the Tekesta sub-area.

The above listed traits constitute only a few of the more outstanding and are by no means of equal value. Certain of the traits appear to be strongly conditioned by environment in some of the areas. For example, the small percentage of shell in the midde.s

The above listed traits constitute only a few of the more outstanding and are by no means of equal value. Certain of the traits appear to be strongly conditioned by environment in some of the areas. For example, the small percentage of shell in the middens of the Kissimmee - eastern Okeechobee sub-area which is in the interior of the state does not have the importance which obtains with a similar small percentage of shell in the middens of the Tekesta sub-area which is coastal. Then, too, it is quite apparent that the elaborate geometric sand works of the Kissimmee-Eastern Okeechobee sub-area are clearly related to the shell works of the Calusa area. The traits listed in this table, however, are probably only a small per cent of the total that will in the future be used as diagnostic traits. Certain artifacts, such as the shell hoe or pick, give great promise of being of value as determinants of areal difference. The method of hafting, the cut, and the angle of the blade all appear to have certain consistent regional differences. Besides this, there are the occurrences of a number of other artifacts whose exact distributions and variations are as yet undefined.

The few shell celts found on the West coast are significant in comparison to their common occurrence at most East Coast sites. Here variances occur in shapes. Probably the most common celt shape is one with more or less parallel sides. Key Largo No. 1 is a pure site of this shape. Another distinctive shape is a rounded triangular form. Large numbers of this shape only, were found at a midden in Coconut Grove. Both of these shapes, as well as other miscellaneous forms, have been found at Surfside, which is the largest midden in the area. Other interesting forms, possibly valuable for stratigraphic purposes, appear in addition to the above mentioned shapes.

The study of the decorations of Glades Gritty Ware has proved to be of some interest. In both the Calusa and the Tekesta subarea certain decoration motifs have distinct distributions. The interesting "feather design" has been described in a previous report.[1] This summer's work (1940) was done mainly on the Upper Keys. Here were found some interesting sites. The largest was Key largo No. 1. The main pottery ware was Glades Gritty, with a small percentage of Biscayne Chalky, and one trade shard that was related to the Safety Harbour series of the northwest coast. The majority of the decorated Glades Gritty shards has one or two incised lines below the rim. Key Largo No. 2 site is about 7 miles south of the above mentioned site and only a few hundred yards from Key Largo No. 3, the famous stone mound. The majority of decorated shards from this, Key Largo No. 2, site were incised with a series of adjacent, bottom opening loops, below the rim. No "straight line below the rim" shards were found. Other sites on Plantation Key and Upper

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1. Goggin, (1939), Loc. cit., pages 38-40

Matacumbe Keys were all of the "straight below the rim" phase. Here we have some variation that may prove to be significant. But whether this is a temporal difference is not known as yet, because of lack of stratigraphic work.

In the Biscayne Bay area the distribution of these two design types is unfortunately not well known. Surf-side, the main site is predominately of the "straight line below the rim" phase. The midden at Little River has produced some of the "loop design" shards, but the material is so scanty that its value is doubtful. Undoubtedly several complete excavations will throw much light upon this subject. For almost any of the present problems complete excavations will be the answer.

The boundary of the Glades area and the Gulf Coast area is not one that is demarcated by a straight line. In the contact zone there are apparently pure sites of each within a short distance of each other. A combination shell works and midden site on Mysterious Island next to Sanibel Island, is apparently pure Glades complex. Among several thousand shards examined at this site all were a local form of Glades Gritty Ware and only three shards were decorated, these with a variation of the "feathered design". Sites not too far distant, examined by others, in previous years showed the typical "Gulf Coast" complex. However, despite this interlocking of sites the limits are fairly well defined.

In the area to the north on the east coast the problem is not so simple. Here we have an area in which little or no work has been done. Apparently the Atlantic Seaboard south of the mouth of St. John's River and east of its greater course is a homogeneous unit whose closest affiliations are with the Glades area, to the south. North and west of the River are complicated stamped, painted, and variously incised pottery wares. These have most of their affiliations with the West Coast or possibly some with Georgia.

In this Atlantic area there is found a pottery ware that is somewhat similar to Glades Gritty. Its limits are not known, however. In the northern part, around New Smyrna, there is a ware which is so closely related to Biscayne Chalky as to appear possibly ancestral. The lack of complicated stamp wares in this area as well as their absence in the Glades area appears to be related.

The country to the west and north of the Kissimmee-Eastern Okeechobee is absolutely without any archaeological information. No relationships can be determined. However, the chances are, that this country is closely related to the "Gulf Coast" area.

Ethno-historical Data Pertaining to An Early Historic Indian Tribe of Louisiana - The Bayogoula.

Andrew C. Albrecht

In a village near the present town of Bayou Goula, Iberville Parish, Louisiana, lived the Bayogoula Indians when the French first began to explore the Lower Mississippi Valley. La Salle (1682) does not make any reference to them. Neither does Tonty (1686). Contact was established, however, shortly after the arrival of Iberville (1699).

At the time of their discovery, the Bayogoula were sharing their village with another Delta-Muskhogean tribe, the Mugulasha. Relations with the French were amicable, but those with their co-occupants and other Indian tribes became exceedingly antagonistic. One surprise attack after another took place. In 1721 their village was

referred to as being practically deserted (cf. Swanton 1911). The tribal group was still in existence, however, when Bienville ascended the Mississippi River in 1739 to punish the Chickasaw. It was not until 1758 that the Bayogoula were definitely listed as one of the Louisiana tribes destroyed by the liquor trade.

Ethno-historical data pertaining to the village and the life of its occupants are preserved mainly in three early journals: that of Iberville (1699), the log-book of the frigate "Le Marin" (1699), and the Diary of Du Ru (1700) a Jesuit Missionary. For comparative and other purposes they may be itemized as follows:

	Iberville	Le Marin	Du Ru
Location of village:	A quarter of a league from the river, "near which there passes a little stream".	60 leagues from the mouth of the river; distant from the river only a quarter of the league.	63 or 64 leagues from the mouth of the Mississippi and 40 leagues from the Houma.
General surroundings:	smooth, open country; palisades made of cane (1 inch apart, 10 feet high).	Fields near village	Tiny gardens for cultivation of tobacco.
Configuration:	_____	A centrally located public plaza.	_____
Ordinary Dwellings:	107 cabins; built like temples; some larger, others smaller; some provided with porticos.	Large and dome-shaped.	Large
Chief's residence:	That of Mugulasha chief located near the entrance of the village.	_____	Large (300 persons could assemble in it)
Temples:	Two temples within same village; provided with special porticos; built of a framework of poles "30 feet across and round" with mud, to height of man; covered with cane mats.	Fronting the public plaza.	One temple a little larger; shaped like dome of "College du Plesis"; covered with thatch and cane mats.

	Iberville	Le Marin	Du Ru
Number of inhabitants	Reference to 250 men and "few women".	400 to 500 persons of both sexes.	
Mode of	Agriculture; maize - the staple food.	Hoe cultivation (Blades of bison bones) Hunting of bear and bison; grounds well defined.	Little efforts expended, but good harvests due to fertility of soil; general neglect of hunting; few took trouble to fish.
Domestic animals:	Cocks and hens, (use not stated)	———	———
Foodstuffs:	Hominy	Corn bread and meat.	Salt dug from ground.
Clothing:	Woman's skirt of bark fibres (Lower part of cords, upper part solid).	Long-skirted coats of deer or bear skins (wearers not specified)	Mostly of skins; also red linen cloth.
Personal enhancement:	Facial painting; (entire face red, half of one cheek black). Black marks tattooed on face and breasts. Dental blackening by means of herb crushed into putty (women only) Hair wrapped around head in a bundle; men cut it short.	careful removal of body and facial hair. Feathers worn in hair. Bracelets, nose pendants, and ear pins (materials not specified) Tuft of hair left on top of head and used to attach feathers (men). Tails of feathers with rattles and tinklers attached to them.	Facial painting (in bizarre colors). Pearls painted red (wearers not specified).
Industries:	Pottery; pots neat and delicate and well worked.	Tinklers made of copper.	Large pots made of shell (?) ground fine, takes before fire, very thin and light and very fragile. Cloth of buffalo hair spun by women. Manufacture of red paint from small seeds.

	Iberville	Le Marin	Du Ru
Musical instruments:	Rattles, flutes and drums	———	———
Fine arts:	Carved figures of beasts; painted red and black (temple roof birds and other figures)	———	———
Religious life:	Sacred fire kept in temple (two logs placed end to end). Offerings of skins to opossum-like figure.	Sacred fire guarded chief; figures of beasts, scalps, and other trophies kept in temple.	Many rows of packages in temple containing bones of dead chiefs
Method of burial:	Platform burials; 7 ft. high; placed around village; body wrapped in cane mats; uppermost mat shaped like roof.	Platform burials on 4 posts; 4 feet high; 50 paces from village.	———

The Tchefuncte Culture

George I. Quimby, Jr.

The earliest known culture in Louisiana has been called Tchefuncte after a type station near Mandeville in St. Tammany Parish. The culture, however, has been formulated upon the basis of six sites of which three are shell middens, one a cemetery, and two circular burial mounds. The midden sites and cemetery are all in the coastal area of Louisiana; the mound sites are farther inland on higher land.

Indirect archaeological evidence and its environment suggest that the Tchefuncte culture was the product of a people with a hunting, fishing, and food gathering economy. The people were short statured, long headed Indians with broad foreheads and high vaults (Charles E. Snow). They buried their dead in cemeteries, middens, and mounds. The bodies were usually flexed or arranged in bundles, although numerous human bones were scattered throughout the midden sites.

The pottery was tempered with fibre, clay, or sand, the latter two being the most common tempering materials. Bowls and jars with flattened bottoms and tetrapodal supports are the only forms which have been found. All of the pottery was made by the coiling process and the vessel surfaces were smooth. The techniques of decoration were incising, linear punctating, punctating, plain rocker stamping, and pinching. The design elements were arranged in bands or plats on the rim or entire vessel exterior. Undecorated pottery, however, was more common than the decorated. The Tchefuncte types are

Tchefuncte Plain, Fibre tempered ware, Tchefuncte Stamped, Tchefuncte Incised, Lake Borgne Incised, Mandeville Plain, Orleans Punctated and Tammany Pinched. Associated with the Tchefuncte types in the upper levels of the midden sites were such types as Crooks Stamped, Marksville Stamped, Alexander Incised, and Marksville Incised.

Other Tchefuncte artifacts of clay were conical and tubular pipes with flattened and expanded bits and spheroidal, cylindrical, and bi-conical Poverty Point clay objects some of which were perforated. The tubular pipes are similar to certain Adena stone pipes.

The typical Tchefuncte projectile point is a long, ovate-triangular stemmed form. Other chipped flint artifacts are thick scrapers, drills, and knives. Other artifacts of stone were quartz crystals, crude boatstones, bar weights, grooved plummets, shaft abraders, crude grinding stones, thin stone grinding saws, and hammerstones.

Bone and antler were considerably utilized by the bearers of the Tchefuncte culture. There were socketed bone projectile points, socketed antler projectile points, socketed bone spear points, an antler atlatl hook, deer ulnae awls and flakers, antler flakers, antler drifts, bone fish hooks, perforated and cut canine teeth, and perforated mammal penis bones.

From Conch shell were manufactured chisels or gouges, containers and gorgets and pendants.

Upon the basis of stratigraphic and typological evidence the Tchefuncte culture is older than the Marksville culture. Typological evidence connects Tchefuncte with the early Southeastern non-ceramic cultures and fibre tempered horizons on the one hand and with later probably agricultural cultures such as Marksville and Adena on the other hand. A detailed report upon the excavations of and evidence from Tchefuncte sites will be published at some future time by the Louisiana Archaeological Survey.

Thanks

It will be noted that the charts used to illustrate the culture sequence in the various areas as presented at the Baton Rouge conference are not included in this Newsletter. The members are fortunate in having the lithoprinting of all materials used in Newsletter donated by the National Park Service and special thanks is due for this assistance. Since a limited amount may be processed each month, it will be necessary to break the entire lot of charts into smaller groups. Some of the charts were reorganized and the whole group will be issued later as a Newsletter or a supplement to this one. It was thought advisable to issue this descriptive matter so that it might be of use at once.

In the preparation of many of the ceramic studies resulting in type descriptions, assistance of the Work Projects Administration has been invaluable. We are all aware of this help but it is well to take this opportunity to thank the various projects for their part in preparing the material.