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Excavations at Texarkana Reservoir
Sulphur River, Texas
By EDWARD B. JELKS

FOREWORD

The following report was written in 1953-54. During the 6-year lapse between writing and publication, several papers have been published which duplicate, augment, or disagree with some of the concepts expressed here. It would have been desirable to rewrite several passages before going to press, but for several reasons that was not possible and I was faced with the problem of weeding out duplication and adding certain explanatory notes at the galley-proof stage. Since the cost of extensive revisions would have been prohibitive, I have resorted to the device of inserting comments here and there, in the form of footnotes, where the text might be confusing with respect to other publications which have appeared since this one was written, or where additional amplification was needed. The added comments are marked with asterisks (*) and are labeled "Author's note."

Many of the pottery and projectile-point types treated here had not been defined in print when this paper was written. Since then all of the types, except the two tentative pottery types Antioch Engraved and Higgins Engraved, have been described in detail in "An Introductory Handbook of Texas Archaeology" (Suhm et al., 1954), and some of the descriptions have been further amplified by Clarence H. Webb in "The Belcher Mound, a Stratified Caddoan Site in Caddo Parish, Louisiana" (1959).

March 1960.

EDWARD B. JELKS.

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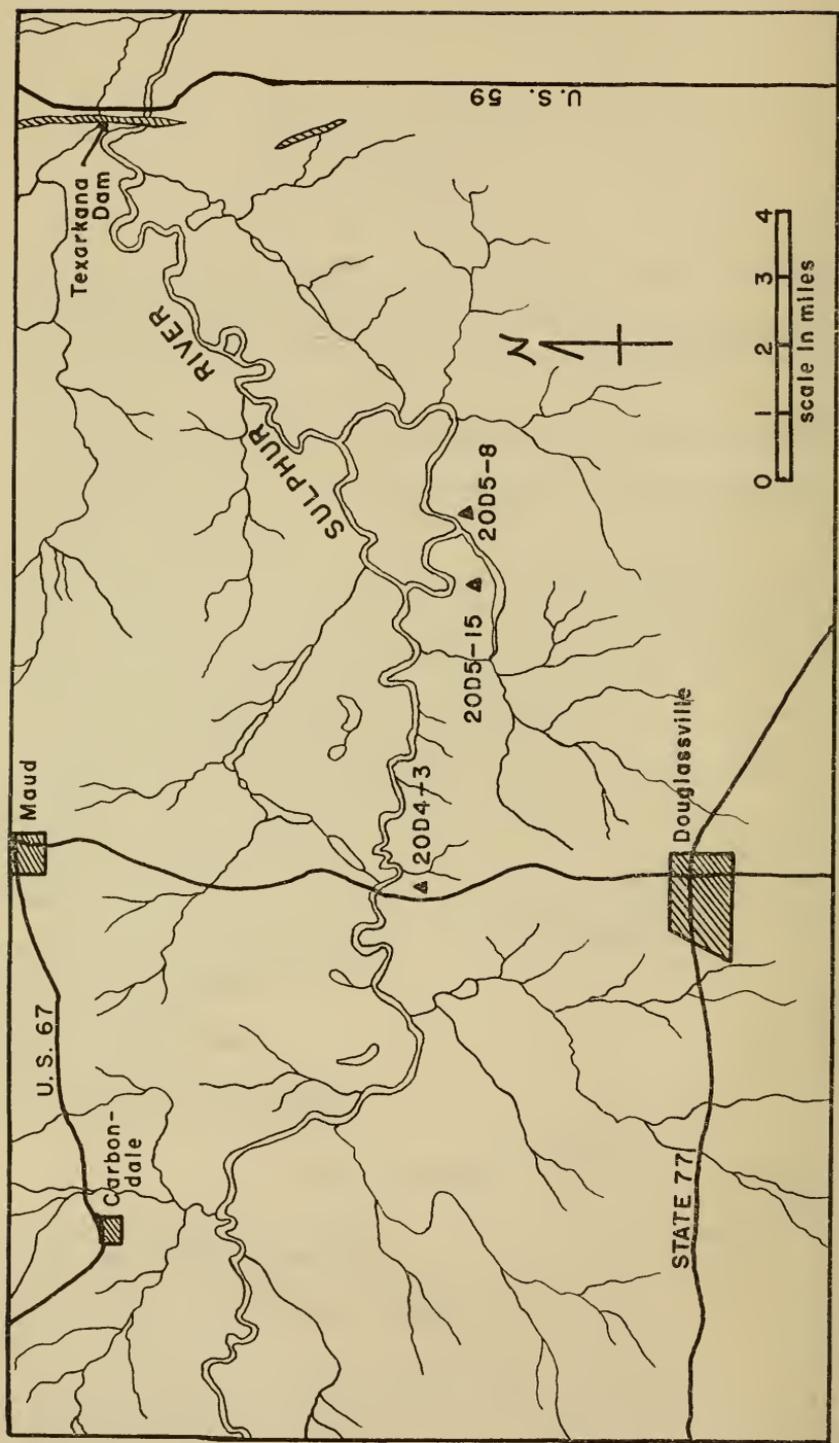


FIGURE 1.—Map of Texarkana Reservoir area, showing location of the Knight's Bluff Site (20D5-8), the Sherwin Site (20D5-15) and the Snipes Site (20D4-3).

EXCAVATIONS AT TEXARKANA RESERVOIR, SULPHUR RIVER, TEXAS ¹

By EDWARD B. JELKS

INTRODUCTION

During the period April 28 to June 25, 1952, limited archeological excavations were carried on at three sites now inundated by the Texarkana Reservoir—the Knight's Bluff, Snipes, and Sherwin sites in Cass County, Tex. This project was part of the nationwide archeological salvage program of the River Basin Surveys, administered by the Smithsonian Institution in cooperation with the National Park Service, the Army Corps of Engineers, and the Bureau of Reclamation.

The excavations at Texarkana were under the immediate supervision of the writer, who was ably assisted in the field by Ensor O. Miller, Edward H. Moorman, and Adolph H. Witte, all three of whom served as foremen and assistant archeologists.

I wish to extend my thanks to all the men who worked on the Texarkana sites for their industry on the dig. I should like also to express my personal thanks, as well as the gratitude of the Smithsonian Institution, to M. P. Miroir, Texarkana, and I. B. ("Bogie") Price, Jr., of Atlanta, Tex., both of whom extended every possible assistance and courtesy to the entire field crew. Their interest in our investigations greatly facilitated the progress of the excavations.

The assistance rendered in the laboratory by Edward H. Moorman, who reconstructed the pottery and skeletal material and helped tabulate the artifacts, is gratefully acknowledged. Alex D. Krieger, who helped with the identification of pottery types and offered many valuable suggestions, contributed much to this report.

Most of all I am indebted to Miss Dee Ann Suhm, who not only cataloged all the artifacts and prepared the notes on physical anthropology for all three sites, but also proffered numerous suggestions regarding interpretation, many of which are incorporated herein.

¹ Manuscript submitted February 28, 1955.

SUMMARY OF CADDOAN AREA ARCHEOLOGY*

Before describing the three sites excavated at Texarkana Reservoir, a brief summary of archeology in the Caddoan Area, including definition of terms, history of previous research, discussion of recognized complexes, chronology, and examination of the outstanding problems, is deemed desirable. This summary is in no sense a complete coverage, but is intended rather as an extremely simplified outline which, it is hoped, will help orient the reader in a segment of North American archeology that is clouded by much uncertainty.

In an area embracing northeastern Texas, southeastern Oklahoma, northwestern Louisiana, and southwestern Arkansas occur archeological manifestations generally attributed to the Caddoan Indians of the early historic period and their forebears. Although the term "Caddoan" originally referred to a cultural group, it has, in recent years, been applied in a geographical sense to the territory in which are found remains presumed to be of Caddoan Indians. As used herein, the term "Caddoan Area" refers to the geographical area, and Caddoan Area archeology is therefore concerned not only with those remains that can be linked more or less certainly to Caddoan Indian groups, but to all indigenous archeological manifestations of the area.

HISTORY OF PREVIOUS RESEARCH

The first systematic investigation of Caddoan Area archeology was made by Clarence B. Moore in the first decade of the 20th century. Moore cruised the Red River in a steamboat, stopping at sites previously located by advance agents and excavating extensively with large crews of laborers. His published site reports (Moore, 1912) contain excellent site descriptions and illustrations, but do not attempt much in the way of interpretation. A few years later M. R. Harrington conducted surveys and excavations in the same region (Harrington, 1920).

Most interpretative research has taken place in the last 25 years, largely through the efforts of Clarence Webb, Monroe Dodd, Harry J. Lemley, Dr. and Mrs. T. L. Hodges, S. D. Dickenson, and others. The present classification of archeological complexes and much of the basic interpretation are to be credited to Alex Krieger, Perry Newell, and Kenneth Orr, and were founded largely on material excavated by the Works Progress Administration (under supervision of the Universities of Texas and Oklahoma). Recent contributions by Robert L. Stephenson (1952) and Donald J. Lehmer (1952), definitive of the Wiley and Turkey Bluff Foci respectively, have greatly clarified marginal complexes.

*AUTHOR'S NOTE. This summary is partly duplicated in Suhm et al., 1954, pp. 144-150, 151-161, 216-219.

ARCHEOLOGICAL COMPLEXES

Suhm et al. (1954) recently defined and named four basic culture stages of the aboriginal occupation of Texas. Their classification will be followed herein. The four stages are:

(1) *Paleo-American Stage*—an early culture with economy based primarily on hunting; associated principally, or entirely, with fauna of the Pleistocene geologic era; previous designations include Paleo-Indian, Early Man, and Ancient Man.

(2) *Archaic Stage*—a hunting-gathering culture that followed the Paleo-American Stage; apparently associated only with modern fauna; characterized by large middens, corner- and side-notched dart points, and evidence of gathering activities; generally antedates ceramics, agriculture, and the bow and arrow.

(3) *Neo-American Stage*—a culture stage marked by local specializations in economic practices, arts, technologies, and ceremonialism; basic subsistence by agriculture, although some groups subsisted by specialized hunting techniques or commercial trading; marker traits include large villages with permanent type houses, ceramics, and the bow and arrow.

(4) *Historic Stage*—a period of convergence and coalescence of the diverse units making up the preceding Neo-American Stage; aboriginal technologies and economic patterns disrupted by impact of European invasion; frequent association of European trade material.

All four of these broad stages can be distinguished in the Caddoan Area and will be taken up in chronological order.

PALEO-AMERICAN STAGE

No artifacts attributable to the Paleo-American Stage have been found in situ in the Caddoan Area to the writer's knowledge. There is considerable evidence, however, that Paleo-American peoples did frequent that region, since many projectile points found there are typologically identical to forms found elsewhere in Paleo-American contexts. J. F. Lentz, of Marshall, Tex., has in his collection of Indian artifacts a fragment of a "classic" Folsom point that he found on the surface of a Neo-American site in Harrison County, Tex., and the writer has observed specimens of Clovis and Scottsbluff points collected from the surface of sites in northeastern Texas, northwestern Louisiana, and southwestern Arkansas. Newell and Krieger (1949, pp. 170-172 and fig. 57, v) reported a fragment of a fluted point (Folsom?) at the Davis Site in Cherokee County. In addition, many projectile points found in the Caddoan Area appear to fit the general Paleo-American typology, although assignment to any of the recognized types cannot be definitely made at present. The presence of Scottsbluff points in the Caddoan Area in significant numbers is especially intriguing, as their occurrence there may be in the form of an island in reference to the total known distribution of the type. There is an alternate possibility: that a peninsular extension of Scottsbluff may descend from the Plains Area into the Caddoan Area.

In brief, Clovis and Scottsbluff projectile points and at least one Folsom point have been observed in local collections of artifacts, testifying to the probability that the Paleo-American Stage is represented in the Caddoan Area. Unfortunately no sites actually occupied by these early peoples have been identified, possibly because most workers in the area have concentrated on the relatively productive Neo-American sites and have expended little or no effort in searching for earlier material. Dense vegetation and limited erosion, too, tend to reduce the chances of discovering buried occupation zones. Private collections examined by the writer contain a few Paleo-American dart points, almost without exception, although the collectors in many cases had not recognized them as such. The collectors generally did not remember where a particular specimen was found, but most of the specimens seem to have been picked up from the surface of Neo-American sites. There is no immediate solution to the question of how these early projectile points came to be at comparatively recent sites.

ARCHAIC STAGE

A preceramic Archaic Stage characterized by corner-notched or stemmed dart points and such polished stone implements as celts, grooved axes, bannerstones, and boatstones has been recognized over the Southern States from the Atlantic Ocean to eastern Oklahoma and Texas (Krieger, 1953, p. 259). Archaic sites in the Caddoan Area belong to that tradition, with perhaps some regional and local variations.

Specific Archaic traits in the Caddoan Area are: Dart points of the types Gary (Newell and Krieger, 1949, pp. 165-166 and fig. 57), Ellis (*ibid.*, pp. 166-167 and figs. 57, 58), Yarbrough (*ibid.*, p. 168 and fig. 57), and San Patrice (Webb, 1946, pp. 13-15 and pl. 1);* chipped-stone blades, scrapers, drills and choppers; three-quarter and full-grooved axes, celts, bannerstones, boatstones, pitted stones, manos, and grinding slabs.

Knowledge of the Archaic is scanty at present, principally because research, for the most part, has been concerned primarily with the relatively abundant Neo-American material and only cursory investigation of preceramic sites has been made. There can be no doubt, however, that the Caddoan Area Archaic is most closely related to the Southeastern Area Archaic rather than to Archaic complexes to the west. Gary, Ellis, Yarbrough, and San Patrice points, as well as Albany spokeshaves and other Archaic artifact forms, are frequently found in Neo-American components, which suggests that

*AUTHOR'S NOTE. Suhm et al. (1954, p. 150) have listed the following additional types for the East Texas Aspect: Wells, Kent, Morrill, Trinity, Elam, Carrollton, Edgewood, Darl, Palmillas, Bulverde, Williams, Uvalde, Lange, Lerma, and Ensor.

the Archaic is ancestral, at least in part, to the Neo-American in the Caddoan Area.

Archaic sites tend, in general, to be small, probably reflecting a seasonal, migratory economy founded on hunting and gathering. In contrast to many Neo-American and Historic sites that are situated on stream terraces, most Archaic sites lie on the crests and slopes of hills.

In terms of absolute dates, accurate placement of the Caddoan Area Archaic cannot be made at present. Its relative position, prior to the Neo-American Stage, is well established, however, on distributional, typological, and stratigraphic evidence.

NEO-AMERICAN STAGE

This stage is marked by the appearance of ceramics and the bow and arrow. Sedentary villages with permanent houses and an agricultural economy typify most sites, but the use of those two features as time markers in distinguishing between Archaic and Neo-American complexes is subject to an element of doubt because present knowledge of the Archaic is only superficial.

Two aspects have been recognized in the Neo-American Stage of the Caddoan Area. The Gibson Aspect, earlier of the two, is characterized by the following traits:

Ceramics—clay, sand, grit, and bone-tempered pottery; well polished bowls and bottles with expertly engraved designs; polished, incised vessels; carinated bowls, usually with concave bases; bottles with tapering necks; long-stemmed, thin-walled clay pipes; effigy clay pipes of human and animal forms; absence of brushing as a surface treatment of ceramics; absence of shell as a tempering agent. Compared with the later Fulton Aspect, Gibson Aspect has a relatively large proportion of plain and polished-incised vessels and a relatively small proportion of roughened utility vessels.

Ground and polished stone artifacts—effigy pipes, earspools, celts, and sandstone hones.

Chipped-stone artifacts—Copena blades and projectile points of several distinctive types.

Mounds—Both temple and burial mounds are common.

Five Gibson Aspect Foci have been recognized: Alto, Gahagan, Spiro, Sanders,² and Haley. One feature common to all is that most sites are large, centralized villages with few outlying sites. The large villages are widely separated as a rule.

Alto Focus and the closely related Gahagan Focus are thought to be earliest of the Gibson Aspect Foci. No burials were found at the Davis Site, type site for Alto Focus, but a large conical mound located there has not been excavated and burials are probably to be

² The Nelson Focus (Bell and Baerrels, 1951) appears to be the Oklahoma equivalent of Sanders Focus. Since too little data are available for accurate definition of the Nelson Focus, it will not be considered here.

found therein. Gahagan Focus is represented by only one excavated site, the Gahagan Mound on Red River in western Louisiana, where ceramics of Alto Focus types were found in graves. That Alto and Gahagan are very closely related cannot be disputed, and the possibility that both should belong to the same focus must be considered. Conclusive statements, however, must be deferred until such time as sufficient data are available to determine the degree of relationship between the two foci.

Spiro Focus ceramics are similar in many respects to those of Alto Focus, but house types, some chipped-stone implements, and other features are different. The rich ceremonial paraphernalia of Spiro Focus are not present at the Davis Site, but elaborate ceremonialism is indicated by grave furniture at Gahagan—although most individual specimens are not comparable to Spiro specimens.

Ceramics of the Sanders Focus, by and large, are quite different from the mutually related Alto-Gahagan-Spiro material. Intricately carved shells at Sanders, however, suggest a fairly close ceremonial relationship with Spiro, and some Sanders pottery types occur in components of the Spiro and Haley Foci.

Haley Focus has a combination of pottery types and other features occurring also in the Alto, Gahagan, and Spiro Foci plus new types and features which herald the appearance of the Fulton Aspect. For that reason, Haley Focus is generally considered to be late with reference to the other Gibson Aspect foci and to bridge, to more or less extent, into the Fulton Aspect.

The second division of the Neo-American Stage in the Caddoan Area has been termed the Fulton Aspect (Krieger, 1946). It is of later date than the Gibson Aspect and is distinguished by the following traits:

Ceramics—appearance of shell-tempered wares; continuation of clay, grit, and bone tempering; elaborate engraved designs on bowls and bottles with much use of ticked and spurred engraved lines; engraved lines are heavier and more forceful than in Gibson Aspect; bottle necks frequently flare at the lip; carinated bowls with flat bases; equal arm elbow pipes of clay; bird and animal effigy heads on bowl rims; rattle bowls.

Chipped-stone artifacts—arrow points of several distinctive types; blades, scrapers, drills, and other implements of various forms.

Twelve foci are presently considered to be affiliates of the Fulton Aspect. They are Frankston, Allen, Titus, Texarkana, Glendora, Bossier, Belcher, Mid-Ouachita, McCurtain, Wiley, Fort Coffee, and Turkey Bluff. All are Neo-American except Allen and Glendora, which are Historic. While a few large village sites are known in the Fulton Aspect, the tendency seems to be toward a great number of small, scattered components as opposed to the large, centralized Gibson Aspect sites. Mound building may have been deemphasized in Fulton Aspect times.

Foci of the Fulton Aspect can be separated into four broad divisions on the basis of degree of similarity between foci. One division is composed of the Frankston Focus and its intimately related Historic counterpart, Allen Focus.³ Both are found between the Trinity and Sabine Rivers, centering in the upper Neches River area, and have been identified with the Hasinai tribes of the early Post-Contact Period and their immediate ancestors. Arrow point type Perdiz and pottery types Poynor Engraved, Bullard Brushed, Maydelle Incised, La Rue Neck Banded, and Killough Pinched are the principal diagnostics of Frankston Focus. Allen Focus has most of the Frankston Focus pottery types plus an additional type, Patton Engraved, not found in the earlier Frankston Focus. European trade material occurs frequently in Allen Focus, but not in Frankston Focus.

Although it shares specific types with some of the other foci, Titus Focus is sufficiently different from the others to be placed in a division by itself. Distinctive artifact types are Talco and Bassett arrow points (the former shared with Fort Coffee, the latter with Texarkana, Belcher, and Mid-Ouachita) and pottery types Ripley Engraved, Harleton Applied, Winfield Brushed, Leesburg Neck Banded, and Taylor Engraved (Taylor is also common in Texarkana, McCurtain, Bossier, Belcher, and Mid-Ouachita sites).^{*} In general, engraved lines tend to be heavy and bold, and several vessel shapes are quite distinctive.

A third broad division of the Fulton Aspect includes Texarkana, Glendora, McCurtain, Mid-Ouachita, Bossier, and Belcher foci. All are closely related in ceramic types, distinctions between the six foci being based mainly on differences in house types, chipped-stone implements, and in slightly different techniques for applying designs to pottery vessels. There are also variations of the basic motifs and vessel shapes from focus to focus.

The fourth group of related Fulton Aspect foci consists of Wiley, Fort Coffee, and Turkey Bluff. They are characterized by a curious blend of traits, part of them related to the Plains Area to the west, the others to the Caddoan Area. Traits apparently derived from the Plains Area include a shell-tempered ceramic type, usually plain but sometimes bearing simple incised or punctated decoration, called Nocona Plain south of Red River and Woodward Plain north of

³ Although belonging to the Historic Stage, the Allen and Glendora Foci can best be reviewed in reference to the Fulton Aspect, the bulk of which fits into the Neo-American Stage. Therefore Allen and Glendora are included along with the other Fulton Aspect Foci in the present discussion.

^{*}AUTHOR'S NOTE. Suhm et al. (1954, p. 192) list Ripley Engraved, Taylor Engraved, Bailey Engraved, Wilder Engraved, and Harleton Applied as the most characteristic pottery types of Titus Focus, with Glassell Engraved, Belcher Ridged, Belcher Engraved, and Karnack Brushed-Incised present in some sites. Leesburg Neck Banded is incorporated in type La Rue Neck Banded, and Winfield Brushed is incorporated in Bullard Brushed.

that stream; triangular arrow points, side-notched or without notches; cache pits; bison scapula hoes and other bone implements; snub-nosed scrapers; shallow flexed or semiflexed burials, frequently without mortuary furniture (this applies with certainty only to Wiley and Fort Coffee, no burial data being available for Turkey Bluff). Caddoan Area traits common to the three foci include various pottery and arrow point types of both the Gibson and Fulton Aspects.

Situated in a narrow zone at the northwestern edge of the Caddoan Area, Wiley, Fort Coffee, and Turkey Bluff are closely related in many details to the Henrietta and Washita River Foci that occupy a narrow adjoining zone to the northwest. Henrietta and Washita River, usually classified as marginal Plains Area cultures, parallel the other three foci closely with respect to Plains traits, but are differentiated by the relatively infrequent occurrence of Caddoan Area traits.

It might be argued that Wiley, Fort Coffee, and Turkey Bluff should not be considered part of the Fulton Aspect proper, but are more on the order of intermediate complexes marginal to both the Caddoan and Plains Areas.*

HISTORIC STAGE

Two foci of the Fulton Aspect have been assigned to the Historic Stage because their components frequently contain European trade items such as glass beads, steel knives, and gun parts. One of them, the Allen Focus, is the Historic equivalent of the Frankston Focus and has been identified with the Hasinai tribe of the Post-Contact Period. Glendora Focus, the other Historic complex, is thought to have developed out of the Texarkana-Bossier-Belcher-McCurtain-Mid-Ouachita bloc.

LOWER MISSISSIPPI INTRUSIONS

In the eastern part of the Caddoan Area—extreme eastern Texas, southwestern Arkansas, western Louisiana, and eastern Oklahoma—are occasionally found archeological remains of cultures whose distribution is centered in the Lower Mississippi Valley. Some of the remains are possibly intrusive in Caddoan sites as trade material, while others apparently represent sites actually occupied by peoples whose strongest cultural ties lie with the Lower Mississippi Valley. Evidence of the Coles Creek complex is especially abundant in the Caddoan Area as compared to other Lower Mississippi complexes. Some indications of Marksville and Troyville occupation are present, however, as well as a possibility of a Tchefuncte-like intrusion on an earlier level.

*AUTHOR'S NOTE. Suhm et al. (1954) include Fort Coffee and Turkey Bluff in the Fulton Aspect, but not Wylie Focus.

OUTSTANDING PROBLEMS

A number of unsolved problems confront workers in the area of Caddoan prehistory. Some of the most urgent of those problems will be discussed briefly in terms of two broad categories: (1) Those concerned with intra-area relationships between cultural units, and (2) those regarding relationships between Caddoan Area peoples and peoples of other areas.

Of prime importance is the need for exploration and definition of Paleo-American and Archaic complexes in the Caddoan Area. Paleo-American complexes have been particularly ignored in the past, but the desirability of intensive search for sites of that stage is obvious in view of the consistency with which Paleo-American projectile points occur in local collections.

Knowledge of the Archaic is somewhat more advanced than that of the Paleo-American, but typological, distributional, and associational studies of Archaic artifacts are needed. Particularly germane to a clear picture of Caddoan Area prehistory are determination of Archaic affiliations with related complexes in surrounding areas and relationships with local Neo-American complexes, some of which may have developed out of the Archaic.

Most field research and interpretative analysis have been devoted to the Neo-American Stage, with the result that many intricate problems related thereto have arisen. With regard to intra-area questions, there is an urgent need for clarification of relationships between the various foci. Krieger's recognition of two aspects, the earlier Gibson and the later Fulton, is based on substantial archeological data. The several foci of the two aspects likewise have solid foundations of concrete data. However, intricate interrelationships exist between the aspects and foci, one to another, thereby posing numerous problems.

Positive relationships between foci, for example, are indicated in both aspects by sharing of ceramic and lithic artifact types. The type-sharing—an extremely complex network cross-cutting the different foci in almost as many directions as there are types—presents a complicated situation that apparently reflects not only simple contact between local groups, but also geographical and temporal factors. Each focus, as defined, has a more or less definite areal distribution, but each of its characteristic artifact types usually has its own peculiar distribution pattern which does not necessarily coincide with the distribution pattern of the focus. Nor do the distribution patterns of the various types correspond to one another in most cases. In addition, there are a number of decorative motifs that occur in more than one ceramic type. These are frequently modified from type to type by variations in execution. Distribution patterns of the motifs

cross-cut the distribution patterns of the types and foci in various directions, making for still greater complexity. Thus there is a crazy patchwork of distribution patterns of artifact types, motifs, and foci, which overlap each other in many directions, yet maintain enough consistency so that clusters of types, at certain points, can be definitely recognized as significant complexes.

The greatest problem of the moment, with regard to intra-area relationships, is to trace the threads of continuity presented by artifact types, motifs, and complexes of associated types, and, when the character, direction, and dimensions of the various threads have been determined and can be viewed with more clarity than at present, to study their relationships, one to another, and seek any interpretative conclusions to which they may lead. Such a detailed study may be expected to produce more accurate definition of the foci, clarify their chronological positions, and shed light on their relationships with each other.

Relationships between Neo-American complexes in the Caddoan Area and complexes of other areas have received much attention. Broad similarities in basic culture and in artifact typology, especially in ceramics, have been noted between Caddoan Neo-American material and archeological complexes of the Lower Mississippi Valley (Ford, 1952). Certain parallels between Caddoan and Southwestern United States archeological complexes have also been noted (Krieger, 1946), particularly with respect to certain vessel shapes and decorative techniques.

Krieger (Newell and Krieger, 1949) has suggested the possibility that the Gibson Aspect may have arisen as a result of stimuli diffused more or less precipitously from Mesoamerica. Ford (1952) offers an alternative hypothesis: that the entire Caddoan sequence is an outgrowth of the Lower Mississippi tradition, which, in turn, may have its roots in Mesoamerica.

With respect to the Lower Mississippi chronology, the relative date of Gibson Aspect's appearance is uncertain, to say the least. Perhaps it should be alined with Marksville as suggested by Krieger (Newell and Krieger, 1949, pp. 223-224), with Coles Creek as suggested by Griffin and Phillips (Phillips, Ford, and Griffin, 1951, p. 455, footnote), or with Plaquemine as suggested by Ford (*ibid.*). Both Gibson Aspect and Lower Mississippi components are present in some quantity in southwestern Arkansas, and it appears to the writer that the best opportunities for making a positive alinement between the two areas lie in the sites of that region.

Relationships between the Fulton Aspect and the Lower Mississippi Area appear to have been somewhat more intimate than in the case of Gibson Aspect. Ceramics of the two areas, at any rate, appear to

have converged more toward a common mean rather than remaining in the mutually distinct relationship existing at the Gibson Aspect level. Too, such innovations as the promiscuous use of shell particles in tempering pottery swept across both areas during Fulton Aspect times, again suggesting a tendency toward convergence of the two separate streams of ceramic evolution.

Principal inter-area problems of the moment, then, are concerned with possible alien sources for the Gibson Aspect, chronological alignment with the Lower Mississippi sequence, and the nature of relationships with neighboring cultures on all sides.

THE KNIGHT'S BLUFF SITE (41-20D5-8)

The Knight's Bluff Site is situated on a high bluff overlooking the Sulphur River from the south, some 6 air-line miles northeast of Douglassville in Cass County, Tex. Springs at the foot of the bluff provide a supply of excellent drinking water ample for the needs of dozens of people. Because the Sulphur is easily fordable at a spot beneath the bluff, one of the pioneer roads traversing Cass County in a northwest-southeast direction runs along the top of the bluff, winds down the steep slope at its northern edge, then crosses the Sulphur at the ford and continues toward the northwest.

The face of the bluff runs almost due north and south, the bluff being approximately 100 feet in height. A low terrace 20 to 40 feet wide and some 15 feet above the water level separates the bluff from the Sulphur River. The surface of the site slopes gently from south to north, with a slight inclination to the east.

The archeological remains occupy an area which was cleared of timber during the latter half of the 19th century and was cultivated more or less continuously until the 1930's. Since then the old field has been used as a pasture. Surface indications of Indian occupation include potsherds, stone artifacts, bone scraps, flint chips, flecks of charcoal, and a few mussel shells.

Well known to local amateur archeologists and pot hunters, the Knight's Bluff Site has been subjected to intensive surface collecting for many years. Artifacts from Knight's Bluff were observed by the writer in several local collections, the largest and most representative series being in possession of Bogie Price, of Atlanta, Tex. His excavation of a shallow burial exposed by plowing in the early 1930's is the only digging reported at the site prior to the salvage operations of the River Basin Surveys.

On September 25, 1949, during a preliminary archeological reconnaissance of the Texarkana Reservoir area for the River Basin Surveys, Robert L. Stephenson visited the Knight's Bluff Site with Bogie Price and M. P. Miroir, an amateur archeologist of Texarkana.

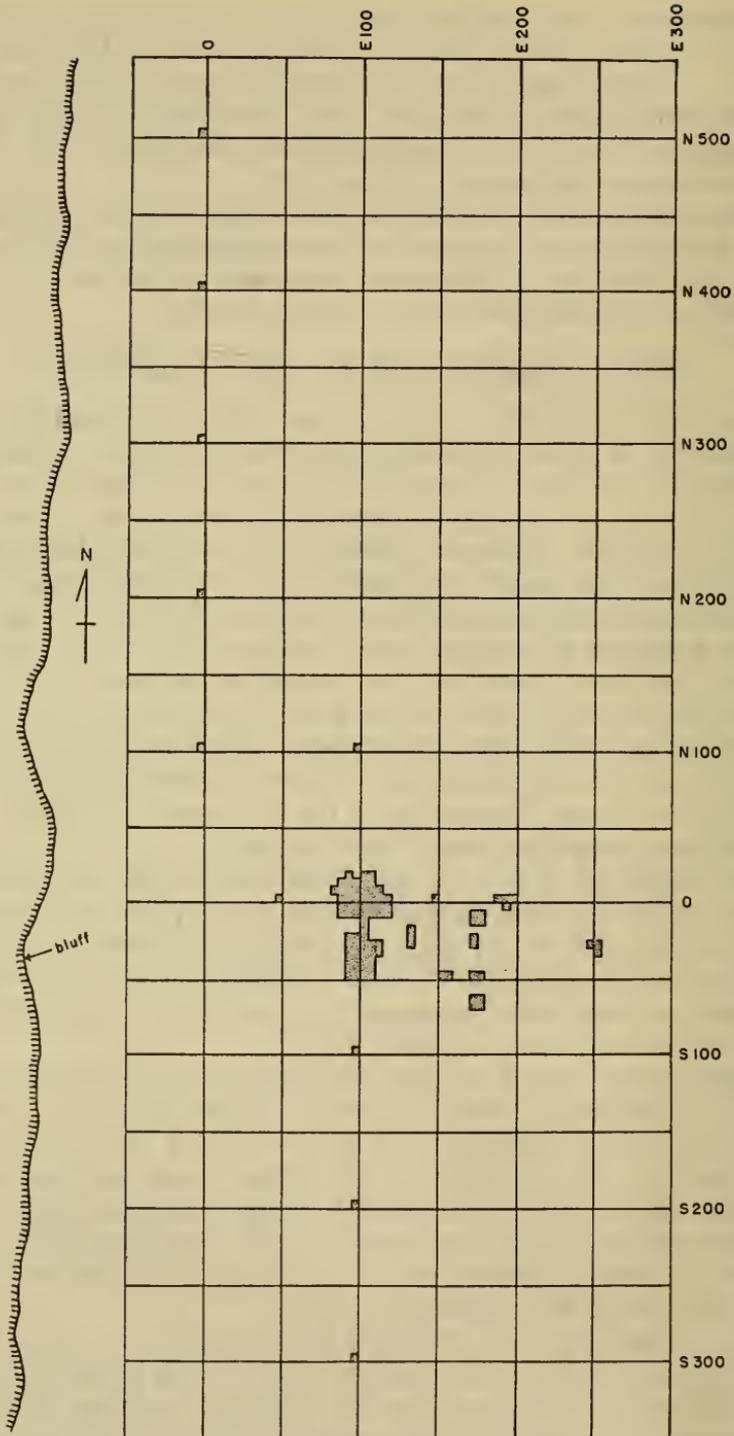


FIGURE 2.—Sketch map of Knight's Bluff Site, showing grid reference system. Excavated areas are denoted by stippling.

They collected a number of artifacts from the surface and sank a small test pit in a midden near the edge of the bluff. Results of the testing and surface collecting were encouraging, and Stephenson recommended in his official report on the survey that one excavation unit (\$26,000) be allotted to investigation of Knight's Bluff. No such sum was appropriated, but excavation of the Knight's Bluff Site was begun on April 28, 1952, and continued until May 26. Prior to excavation a grid reference system (fig. 2) was superimposed in the following manner:

A datum point was established at arbitrary elevation 10 feet, and a magnetic north-south line was run through that point. Stakes were placed at 100-foot intervals along the line. A second line, similarly staked at 100-foot intervals, was projected to the east from datum, and a third line was imposed 100 feet east of—and parallel to—the first north-south line. This resulted in a series of reference stakes 100 feet apart. In all portions of the site actually excavated, the 100-foot squares were further broken down into 5-foot squares. With the stake at its southeast corner as reference, each 5-foot square was assigned a designation derived from the distance (in feet) of its coordinates from datum. For example, a 5-foot square whose southeast corner was formed by coordinate lines 50 feet south and 100 feet east of datum would be labeled S50-E100.

In excavating the 5-foot squares, each was taken down by arbitrary 6-inch levels, the digging being done with small trowels, and all specimens from each 6-inch level were put into a separate sack that was sealed and labeled according to square and level. The surface elevation at the southeast corner of each square was used as reference in measuring the 6-inch levels of that particular square.

In order to determine which parts of the site were most promising, 5-foot test squares were dug at each 100-foot stake on the line extending due north from datum and at the two 100-foot stakes on the line running east from datum. Along line E100 (i.e., the north-south line passing 100 feet east of datum) six similar test squares were also excavated. As a result of these tests it soon became evident that cultural material decreased in quantity down the slope to the north of datum, and a similar decrease was noted, beginning about 50 feet south of datum, in the test squares leading up the slope of the hill to the south. The greatest concentration of cultural material, including 10 burials and 1 house pattern, was found in an area from 50 to 200 feet east of datum in the 100-foot strip lying between lines N50 and S50.

Three geological strata (fig. 3) were present over most of the Knight's Bluff Site: Stratum 1, a reddish-clay member lying 6 to 32 inches below the surface and extending to unknown depth;

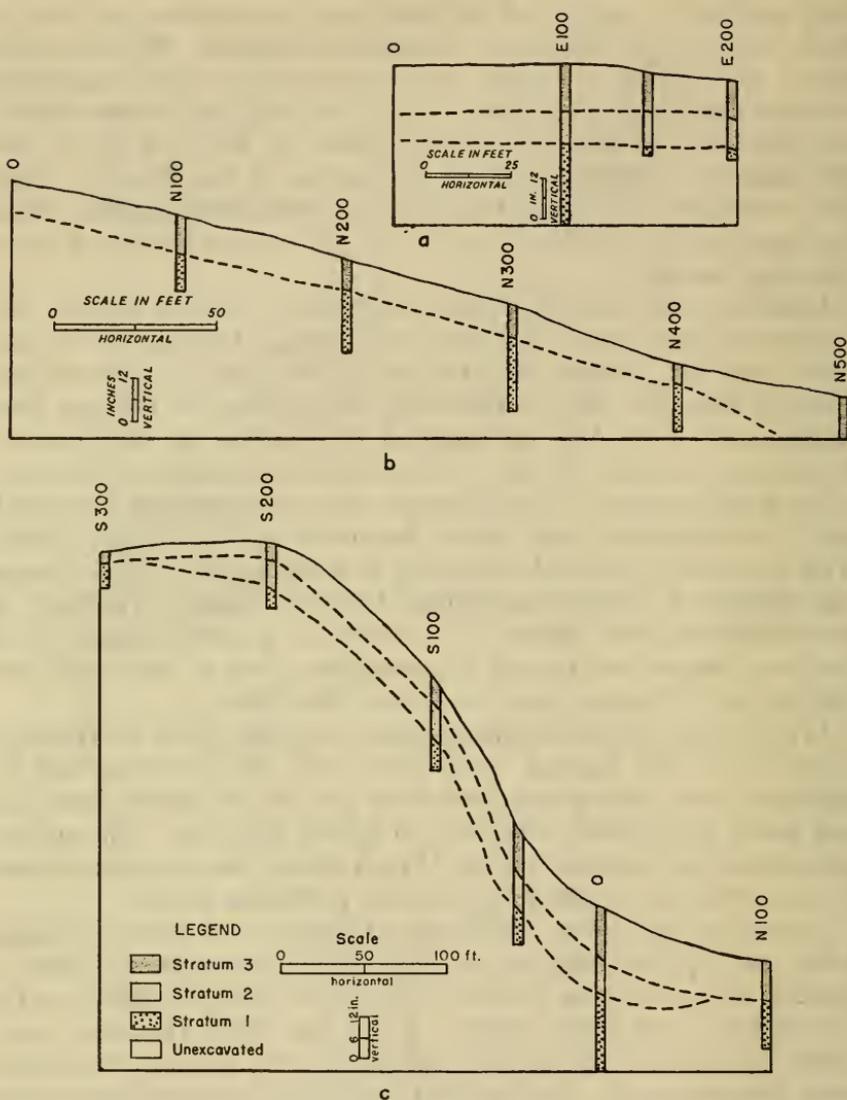


FIGURE 3.—Profiles, Knight's Bluff Site. *a*, East-west profile at line 0; *b*, north-south profile at line 0; *c*, north-south profile at line E100.

stratum 2, a clean yellowish-brown sand up to 12 inches in thickness, overlying stratum 1 between grid lines N100 and S300; and stratum 3, the surface member of light- to dark-gray sand which blanketed the entire area.

Stratum 1 was sterile of cultural material except for the upper 3 or 4 inches, where a few chipped stone implements and flint chips representing a preceramic occupation of the site were found. Similar lithic material continued throughout strata 2 and 3, but ceramics occurred only in stratum 3 and the upper part of stratum 2.

Stratum 2 was absent north of grid line N100 and south of line S300. It was confined to the 400-foot interval between those two lines, apparently pinching out at its margins.

FEATURES

A portion of one house pattern (fig. 4) was found about 100 feet southeast of datum. Fifteen post molds, 5 to 7 inches in diameter and 19 to 26 inches apart, formed an arc of approximately 110 degrees on a radius of 13 feet. The molds mark the position of post-

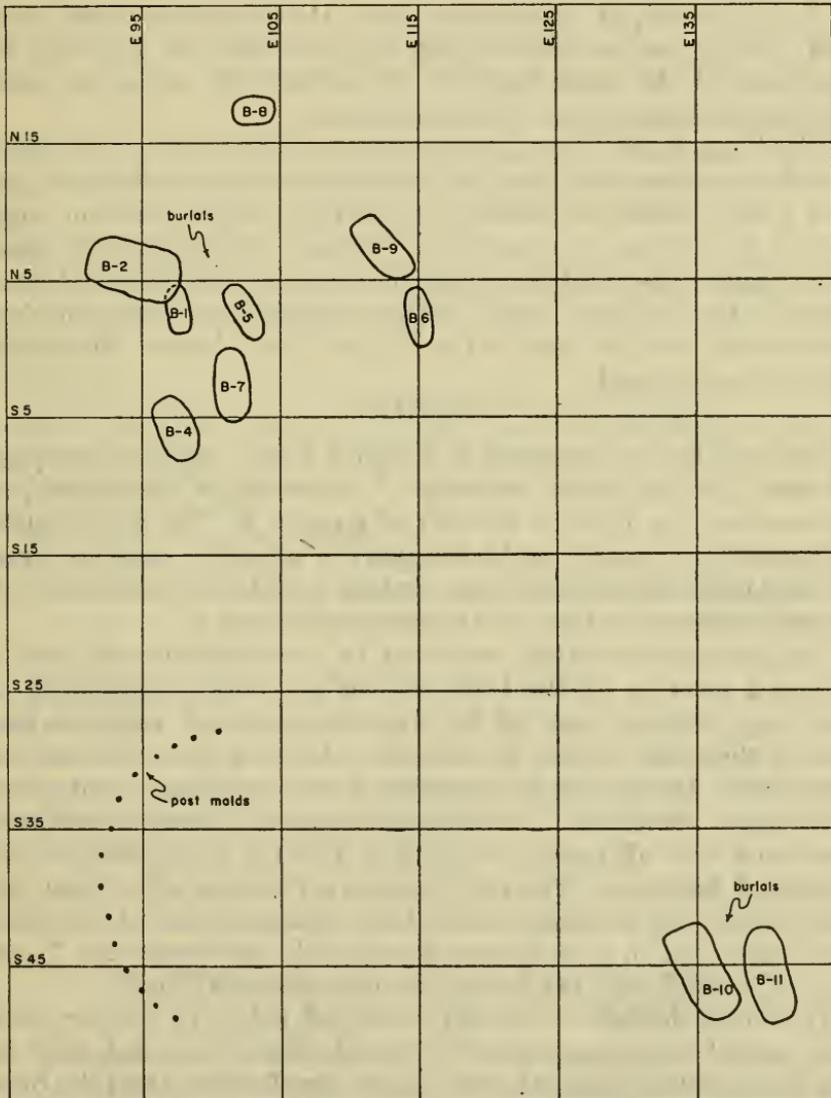


FIGURE 4.—Sketch map of portion of Knight's Bluff Site, showing position of the burials and the post molds.

holes that had apparently been dug through stratum 2 into stratum 1. In stratum 1 the molds were clearly distinguishable as yellowish-brown areas that were much softer than the compact clay into which they extended. The molds could not be detected in stratum 2, however, although they undoubtedly had been dug through that member. At the middle of the arc the molds extended 10 to 11 inches into stratum 1, then gradually decreased in depth in both directions. The hypothetical molds required to complete the eastern two-thirds of the house pattern were evidently confined entirely to stratum 2 where they did not show up.

A circular-shaped midden area, up to 14 inches thick at the center and lensing out at the margins, lay over stratum 2 within the perimeter of the house pattern. It undoubtedly represents debris that accumulated on the floor of the house.

Little can be said about construction details of the house except that it was circular in shape, approximately 26 feet in diameter, and had a wall framework basically formed of upright poles no larger than 5 to 7 inches in diameter at the base. Conspicuously absent were traces of the wattle-impressed daub so frequently found at house sites in the Caddoan Area, which suggests that wattle-and-daub construction was not used in the Knight's Bluff house. No interior features were found.

BURIALS

Ten burials were excavated at Knight's Bluff. With the exception of burial No. 1, which was only 12 inches below the surface, all graves were dug into the red clay of stratum 1. The grave outline of burial No. 1 could not be detected; in all other cases the grave fill contained reddish clay from stratum 1, and grave outlines could be easily seen where they cut through strata 2 and 3.

The burials were fairly consistent in some respects; all were in extended position on the back, all but one were accompanied by mortuary offerings, and all but two were oriented with the head toward the south or east or somewhere between those two cardinal directions. Burial No. 2 consisted of two individuals; all others were single interments. Mortuary offerings of pottery vessels were associated with all burials except Nos. 1 and 8 which were entirely devoid of furniture. The only mortuary furniture other than pottery vessels were a large stemmed knife or spear point of novaculite with burial No. 5, a perforated mussel shell with burial No. 7, and part of a small shell pendant at the neck of burial No. 7.

Individual burials are briefly described below in tabular form. The cranial measurements and physical observations, not only for the Knight's Bluff skeletal material but also for that from the Sherwin and Snipes Sites described later in this report, were made by Miss Dee Ann Suhm.

BURIAL No. 1:

Location: Square NO-E100.

Grave dimensions: Indeterminate.

Type of burial: Extended, on back, with hands over face.

Orientation: Head to south.

Dimensions of skeleton: Maximum length, 44 inches; maximum width, 10 inches; thickness, 6 inches.

Completeness: Feet and mandible missing.

Preservation: Fair.

Associations: None.

Physical observations and measurements:

Sex: Indeterminate.

Age: Adolescent.

Cranial measurements: Maximum length, 174 mm.; maximum width, 131 mm.; index, 75.2 (mesocranic); minimum frontal diameter, 95 mm.

General observations: Occipital flattening; a shallow depression about 40 mm. wide in the post-coronal area parallel to coronal suture; frontal eminences only slightly developed; directly above each frontal eminence is a small depressed area; skull is twisted, probably as a result of warping after interment.

Remarks: Burial No. 1 is atypical in that the grave is comparatively shallow and there are no mortuary offerings of nonperishable materials. The missing feet were severed during the digging of a later grave (burial No. 2).

BURIAL No. 2:

Location: Squares NO-E95, NO-E100, N5-E95, and N5-E100.

Grave dimensions: Maximum length, 90 inches; maximum width, 55 inches; depth, 46 inches.

Type of burial: Contained two individuals, both extended on the back, with arms at sides.

Orientation: Heads to southeast.

Dimensions of skeletons: Skeleton No. 1 (on left side of grave)—maximum length, 72 inches; maximum width, 23 inches; thickness, 8 inches. Skeleton No. 2—maximum length, 70 inches; maximum width, 21 inches; thickness, 8 inches.

Completeness: Vestiges of most major bones present.

Preservation: Fair.

Associations: Two small jars of type Nash Neck Banded (pl. 1, b, c) 6 inches southwest of skull of skeleton No. 1; small bottle of type Haley Engraved (pl. 1, a) between skulls; small engraved bottle of type Antioch Engraved (pl. 1, d) at right knee of skeleton No. 1.

Physical observations and measurements:

Sex: Skeleton No. 1, male; skeleton No. 2, female.

Age: Skeleton No. 1, 50 to 55 years; skeleton No. 2, about 40 years.

Cranial measurements, skeleton No. 1: Skull too warped for accurate measurements.

Cranial measurements, skeleton No. 2: Maximum length, 176 mm.; maximum width, 121 mm.; index, 68.7 (dolichocephalic); minimum frontal diameter, 86 mm.

General observations, skeleton No. 1: Skull drastically warped, probably after interment; marked artificial deformation of fronto-occipital area; forward portion of jaw small and narrow; jaw has a marked flare at the ramus; small, deeply depressed area just aboveinion may be the result of an injury.

BURIAL No. 2—Continued

General observations, skeleton No. 2: Intentional fronto-occipital flattening; post-coronal region is depressed, probably a result of cranial deformation.

Remarks: Only burial containing more than one individual. Skeleton No. 2 has the only long-headed skull in the Knight's Bluff series.

BURIAL No. 3:

Due to an error in cataloging, no burial was assigned the number 3.

BURIAL No. 4:

Location: Squares S5-E100 and S10-E100.

Grave dimensions: Maximum length, 65 inches; maximum width, 26 inches; depth, 45 inches.

Type of burial: Extended, on back.

Orientation: Head to southeast.

Dimensions of skeleton: Not recorded.

Completeness: All major bones present.

Preservation: Good.

Associations: Large incised-appliqued jar, type Pease Brushed-Incised (pl. 1, e); medium-sized, brushed bowl (pl. 1, g); small engraved bottle, type Antioch Engraved (pl. 1, f); all three vessels to right of head and shoulder.

Physical observations and measurements (see pl. 16, a, b):

Sex: Female.

Age: About 20 years.

Cranial measurements: Maximum length, 171 mm.; maximum width, 135 mm.; index, 78.9 (mesocranic); minimum frontal diameter, 94 mm.; basion-bregma height, 141 m.: mean height index, 92.1 (high); nasal index, 37.7 (leptorrhinc); bigonial diameter, 97 mm.

General observations: Fronto-occipital deformation; post-coronal depression; teeth very crowded; canines erupting laterally above first and third molars; slight alveolar prognathism.

BURIAL No. 5:

Location: Square NO-E105.

Grave dimensions: Maximum length, 69 inches; maximum width, 22 inches; depth, 27 inches.

Type of burial: Extended, on back, arms at sides.

Orientation: Head to south-southeast.

Dimensions of skeleton: Maximum length, 58 inches; maximum width, 19 inches; thickness, 9 inches.

Completeness: Most major bones present.

Preservation: Fair.

Associations: Small incised-appliqued jar, type Pease Brushed-Incised (pl. 2, a) immediately behind skull; novaculite knife or spear point (pl. 12, d) at left hip near hand.*

Physical observations and measurements (see pl. 16, c, d):

Sex: Male.

Age: About 45 years.

Cranial measurements: Maximum length, 177 mm.; maximum width, 147 mm.; index 83.1 (brachycranic); minimum frontal diameter, 94 mm.; mean height index, 86.8 (high); nasal index, 52 (platyrhinc); bigonial diameter, 104 mm.

*AUTHOR'S NOTE. This is a Pogo-type spear point as defined by Suhm et al. (1954, p. 398, pl. 78).

General observations: Fronto-occipital deformation (but no post-coronal depression); top of skull somewhat keel-shaped; very pronounced supraorbital ridges; malars very flaring; slight alveolar prognathism; skull generally massive.

Remarks: Only burial with chipped stone furniture.

BURIAL No. 6:

Location: Squares NO-E115 and NO-E120.

Grave dimensions: Maximum length, 56 inches; maximum width, 19 inches; thickness, 6 inches.

Type of burial: Extended, on back, right arm at side, left forearm across body at right angle to spine.

Orientation: Head to north.

Dimensions of skeleton: Maximum length, 56 inches; maximum width, 19 inches; thickness, 6 inches.

Completeness: Portions of most major bones present.

Preservation: Skull in fair condition; other bones in advanced stages of decomposition.

Associations: Base of pottery bottle resting on skull.

Physical observations and measurements (see pl. 16, e, f):

Sex: Probably female.

Age: Adolescent.

Cranial measurements: Maximum length, 154 mm.; maximum width, 145 mm.; index 94.1 (hyperbrachycranic); minimum frontal diameter, 93 mm.; mean height index, 91.9 (high); nasal index, 45.9 (leptorrhinic).

General observations: Pronounced fronto-occipital deformation (but no post-coronal depression); numerous Wormian bones along the lambdoid suture and the oval-shaped ear opening are possibly a result of deformation.

BURIAL No. 7:

Location: Square S5-E105.

Grave dimensions: Maximum length, 75 inches; maximum width, 29 inches; depth, 37 inches.

Type of burial: Extended, on back, arms at sides.

Orientation: Head to south-southeast.

Dimensions of skeleton: Maximum length, 57 inches; maximum width, 25 inches; thickness, 5 inches.

Completeness: Most of cranium missing; portions of most long bones present.

Preservation: Poor.

Associations: Small engraved bottle, type Antloch Engraved (pl. 2, c), at left shoulder; small engraved carinated bowl (type Friendship Engraved) at left side 8 inches below shoulder (pl. 2, b); perforated mussel shell at left wrist; small mussel-shell pendant in neck region.

Physical observations and measurements: Adolescent. Measurements and other observations indeterminate.

BURIAL No. 8:

Location: Square N15-E105.

Grave dimensions: Maximum length, 36 inches; maximum width, 24 inches; depth, 25 inches.

Type of burial: Extended, on back, arms at sides.

Orientation: Head to east.

Dimensions of skeleton: Maximum length, 22 inches; maximum width, 9 inches; thickness, 5 inches.

BURIAL No. 8—Continued

Completeness: Portions of most major bones present; hand and foot bones missing.

Preservation: Poor.

Associations: One unworked mussel shell in contact with top of skull (may not be an intentional inclusion).

Physical observations and measurements: Infant. Measurements and other observations indeterminate.

BURIAL No. 9:

Location: Square N5-E115.

Grave dimensions: Maximum length, 69 inches; maximum width, 24 inches; depth, 30 inches.

Type of burial: Extended, on back, arms at sides.

Orientation: Head to southeast.

Dimensions of skeleton: Maximum length, 65 inches; maximum width, 23 inches; thickness, 6 inches.

Completeness: Foot and left hand bones missing; most other bones present.

Preservation: Good.

Associations: Engraved bottle, type Haley Engraved (pl. 2, *d*), at right shoulder; large, incised-appliqued jar, type Pease Brushed-Incised (pl. 2, *e*), at right hip resting on right hand.

Physical observations and measurements (see pl. 17, a, b):

Sex: Probably female.

Age: About 50 years.

Cranial measurements: Maximum length, 180 mm.; maximum width, 138 mm.; index, 76.6 (mesocranic); minimum frontal diameter, 95 mm.; mean height index, 88 (high); nasal index, 49 (mesorhinic); bigonial diameter, 95 mm.

General observations: Fronto-occipital region not deformed; a slight flattening of the parietal is probably due to post-mortem warping; depressed area around inion; occipital bisected laterally by several sutures (Inca bones); marked alveolar prognathism.

BURIAL No. 10:

Location: Squares S45-E135, S45-E140, S50-E135, and S50-E140.

Grave dimensions: Maximum length, 100 inches; maximum width, 46 inches; depth, 60 inches.

Type of burial: Extended, on back, arms at sides.

Orientation: Head to southeast.

Dimensions of skeleton: Maximum length, 63 inches; maximum width, 15 inches; depth, 6 inches.

Completeness: Almost 100 percent.

Preservation: Good.

Associations: Engraved bottle, variant of type Haley Engraved? (pl. 2, *f*), at corner of grave above left shoulder; medium-sized, incised-appliqued jar, type Pease Brushed-Incised (pl. 2, *g*), at edge of grave about a foot from left hip.

Physical observations and measurements:

Sex: Male.

Age: 45 to 50 years.

Cranial measurements: Skull too warped for accurate measurement.

General observations: Pronounced fronto-occipital deformation; post-coronal depression; pronounced supraorbital ridges; skull thin; advanced caries in second molars, lower jaw.

BURIAL No. 11:

Location: Squares S45-E140, S45-E145, S50-E140, and S50-E145.

Grave dimensions: Maximum length, 72 inches; maximum width, 30 inches; depth, 48 inches.

Type of burial: Extended, on back.

Orientation: Head to northwest.

Dimensions of skeleton: Not recorded because of lack of preservation.

Completeness: Skull and long bone parts present; most other bones completely decomposed.

Preservation: Poor.

Associations: Engraved bottle, possibly a variant of type Haley Engraved (pl. 3, b); brushed-incised jar, type Pease Brushed-Incised (pl. 3, a); engraved bowl, unidentified type (pl. 3, c).

Physical observations and measurements:

Sex: Probably female.

Age: 16 to 18 years.

Cranial measurements: Maximum length, 175 mm.; maximum width, 140 mm.; index, 80 (brachycranic); minimum frontal diameter, 90 mm.; bigonial diameter, 95 mm.

General observations: No artificial deformation; supraorbital ridges moderately pronounced; depression above each orbit in region of frontal eminences; slight sagittal ridge, depressed on either side at the sagittal suture; advanced caries in upper second molar.

THE ARTIFACTS

The artifacts recovered from the Knight's Bluff Site, most of them potsherds, totaled 6,564. For purposes of associational analysis, 20 individual 5-foot squares and blocks of squares were arbitrarily designated as associational units, and the artifacts from each unit were laid out on tables by depth and strata. There was absolutely no significant indication of typological stratification in the units except that several dart points occurred in the uppermost few inches of stratum 1 (the compact clay member underlying the two uppermost strata of sand) where no pottery was found. A light occupation at that level is indicated by the presence of flint chips in addition to the dart points. The dart points include types Gary and Ellis, indistinguishable from specimens of the same types in the overlying, pottery-bearing zone.

Of possible bearing on the lack of stratification of pottery types is the intricate maze of rodent holes that laced strata 2 and 3, the soft, sandy, uppermost strata. Little evidence of rodent activity was observed in stratum 1, probably because the clay was extremely hard and compact. Also, few rodent holes were encountered in the compact midden material of the house floor.

The house-floor midden can certainly be considered an excellent associational unit; that is, the artifacts occurring therein can be assumed, with little possibility of error, to be material discarded by the occupants of the house and consequently to have been used by one small group of people during a relatively short period of time.

Since the artifacts from the house floor are comparable to those from the rest of the site as a whole, it appears that the bulk of the artifacts from the entire site can be tentatively assigned to occupation by one small village of people over a period of perhaps 10 to 50 years. Some adulteration from a light preceramic occupation is to be expected, and there is the possibility that the site may have accumulated a few artifacts from campers either prior to and/or subsequent to the existence of the village.

CERAMICS

Most of the pottery types have been previously described, but five important types first recognized by Krieger (1946) have not been described in detail.* One type, Pease Brushed-Incised, previously described by Webb (1948, pp. 110-113), occurred in quantity at Knight's Bluff, but with variations not precisely compatible with Webb's definition. Consequently, before taking up a discussion of the relationships between types within the site, Krieger's five types (Barkman Engraved, Simms Engraved, Nash Neck Banded, Mc-Kinney Plain, and Cass Applied) and Pease Brushed-Incised will be described individually, the Pease description being slightly expanded beyond Webb's original definition.

Barkman Engraved

PASTE:

Method of manufacture: Coiled.

Temper: Clay grit, rarely with very tiny white particles which seem to be pulverized shell or bone.

Texture: Granular, with tiny grains. Well fired, homogeneous, and hard. Sherds tend to shatter rather than crumble.

Color: Core is black or dark gray. Exterior surface is usually dark gray or black, but some specimens range into light shades of orange and buff. Interior surfaces exhibit the same color variations as the exterior, but may be light in shade when the exterior is dark, or dark when the exterior is light. Mottling due to uneven firing is common.

Surface finish: Well smoothed on both interior and exterior. Exterior is frequently polished.

FORM:

Wall thickness: Average about 5 mm., with extreme range of 3 to 8 mm.

Lip: Usually sharply convex and rolled outward slightly.

*AUTHOR'S NOTE. All of these types, as well as type Haley Engraved described later, have now been described in detail by Suhm et al.; therefore the present descriptions are largely repetitious. There are some differences in detail, though, between the present descriptions and those of the Handbook of Texas Archeology; in one case, in fact, there is enough difference so that two particular vessels herein identified as type Haley Engraved (pls. 1, a; 5, i) are illustrated in the Handbook (pl. 65, P, Q) as examples of Taylor Engraved. To have followed the Texas Handbook typology would have required re-analysis of all the artifacts, a procedure that was not feasible after the paper had been set in type. The artifacts from the Texarkana sites were analyzed on the basis of the type descriptions given here, not on those of the Handbook of Texas Archeology.

Base: Usually disk shaped, sometimes convex and rounded.

Vessel shape and size: Occurs only as carinated bowls, with vertical or inwardly inclined rims ranging in height from 5 to 7 cm. There is a sharp shoulder just below the rim. Below the shoulder the body walls taper to the base, which is usually a small disk. Outline shape is angular, and vessel height is 10 to 20 cm.

DECORATION:

Treatment: Engraving.

Design: Decoration is confined to the rim. There are usually two or three parallel, horizontal lines just below the lip, under which lie the principal designs of engraved bands and lines arranged in rectilinear and overlapping step patterns. The bands consist of parallel lines, the spaces between them filled in with hatching, crosshatching, or lines of engraved punctates. Ticked and spurred lines are common. Lines are often filled with white pigment, but red pigment is absent or extremely rare.

CULTURAL AFFILIATIONS: Indigenous type of Texarkana Focus; does not seem to have survived into the Historic Glendora Focus nor to be present as a resident type in any other focus with the possible exception of Belcher Focus.

DISTRIBUTION:

Geographical: Small area in northeastern Texas and adjacent corners of Louisiana and Arkansas. Apparently absent in Oklahoma.

Temporal: Estimated, A.D. 1200-1600.

REMARKS:

Very similar in design and execution to Taylor Engraved of the Belcher Focus, and Friendship Engraved of the Mid-Ouachita Focus. Taylor differs from Barkman in having the decorations divided into four separate panels whereas Barkman has a continuous design around the rim. Also, Taylor seldom, if ever, has a disk-shaped base. Friendship bowls generally have more hachured area than Barkman and tend more toward curvilinear designs and emphasis of negative elements. Despite these differences, the similarity between Barkman, Taylor, and Friendship is striking.

Barkman bears close resemblances also to types Simms Engraved (Texarkana and Glendora Foci) and Belcher Engraved (Belcher Focus) in paste and decorative techniques. Certain design motifs are almost identical in the three types, differentiation being based primarily on vessel shape and differences in distribution.

BIBLIOGRAPHY: Krieger, 1946, p. 230, and fig. 18.

Simms Engraved

PASTE: Same as for Barkman Engraved, except that red filming and shell tempering occur occasionally.

FORM:

Wall thickness: 4 to 7 mm.

Lip: Sharply convex.

Base: Convex or disk shaped.

Vessel shape and size: Occurs only as carinated bowls. Rims are very narrow and turn inward at unusually sharp angles, with many curving outward again just below the lip. Below the rim, the walls may curve evenly across the bottom to form a convex base, or curve gently to a flat, disk-shaped base. Most specimens are 6 to 10 cm. high, but one extreme example measured 21 cm. Oral diameter is generally greater than vessel height.

DECORATION:

Treatment: Engraving.

Design: Decoration is confined to the rim, and consists largely of long, narrow, rectangular patterns featuring plain lines, ticked lines, and rows of engraved "dashes." Lines may be filled with either red or white pigment.

CULTURAL AFFILIATIONS: Indigenous type of Texarkana and Glendora Foci, but absent, or extremely rare, in earlier Texarkana Focus components. May be affiliated also with McCurtain and Belcher Foci.

DISTRIBUTION:

Geographical: Northeastern Texas, northwestern Louisiana, and southeastern Oklahoma. May extend slightly into Arkansas.

Temporal: Estimated, A.D. 1400-1700.

REMARKS: Closely related typologically to Belcher Engraved (Belcher Focus), Taylor Engraved (Belcher Focus), and Barkman Engraved (Texarkana Focus).

BIBLIOGRAPHY: Krieger, 1946, p. 230, and fig. 18.

Cass Appliqued

PASTE:

Method of manufacture: Coiled.

Temper: Clay; occasionally with small amounts of tiny to medium-sized particles of shell and/or bone.

Texture: Homogeneous, medium hard, usually well fired.

Color: Surface colors are mostly light oranges, creams and grays, with some mottling due to uneven firing. Core color is generally the same as surface color.

Surface finish: Well smoothed on the interior. Exterior surface also smoothed, with edges of the applique ridges blended evenly with the surface. Tool marks visible, especially where edges of applique strips were smoothed into the surface.

FORM:

Wall thickness: Average 6 or 7 mm., range 4 to 9 mm. (measurements taken from peak of ridges to vessel interior).

Lip: Convex.

Base: Disk shaped.

Vessel shape and size: Jars only have been noted. Bodies are globular in shape; rims are slightly everted. Vessels are 10 to 20 cm. tall. Oral diameters are approximately equal to vessel height.

DECORATION:

Treatment: Appliqueing and punctating.

Design: Thin, closely spaced applique strips, 3 to 5 mm. in width, are arranged in groups or sets, each set consisting of 2 to 10 parallel strips. The sets are diagonally opposed to each other, so that the ends of the strips in one set terminate at a sharp angle against the outermost strip in the adjoining set. There are usually 10 to 15 sets which cover the entire body of the vessel from base to neck. On the rim are 2 or 3 horizontal bands of closely spaced punctates made with a blunt-ended implement.

CULTURAL AFFILIATIONS: Occurs in components of both the Texarkana and Glendora Foci.

DISTRIBUTION:

Geographical: Not known in detail, but may be presumed to include the area in which Texarkana and Glendora components occur.

Chronological: Estimated, A.D. 1300-1700.

REMARKS: Definition based on very small sample and probably will require future revision.

BIBLIOGRAPHY: None.

Nash Neck Banded

PASTE:

Method of manufacture: Coiled.

Temper: Clay; approximately 20 percent is shell tempered in collections from northeastern Texas, but the percentage of shell tempering runs much higher in components of the McCurtain Focus in southeastern Oklahoma.

Texture: Medium hard, usually fairly well fired.

Color: Surface colors are buffs, light grays, and dark grays. Smudges of carbonized organic matter are frequent, and mottling of the surface due to uneven firing is common. Core colors tend in general to be darker than surface colors, with dark gray and black predominating.

Surface finish: Interiors are usually well smoothed, exteriors less so.

FORM:

Wall thickness: Average 5 to 6 mm., extreme range 3 to 10 mm.

Lip: Flat or convex, usually with four high, evenly spaced, angular peaks (rarely there are five such peaks).

Base: Flat, disk shaped.

Vessel shape and size: Occurs only as jars with globular or ovoid bodies. Necks are relatively broad and curve outward. Strap handles are common, usually placed directly under the peaks on the rim. Nonfunctional handles, with no opening between handle and vessel wall, are not uncommon, and simple nodes occasionally occur, evidently as vestigial representations of handles. Most specimens fall into the height range of from 10 to 25 cm., although miniatures only 5 or 6 cm. high and very large jars up to 50 cm. in height are known. Oral diameters usually are about equal to overall height.

DECORATION:

Treatment: Corrugation (produced by pinching the coils together with no subsequent smoothing), fingernail punctating, and appliqueing.

Decoration: Principal decoration is the horizontally corrugated neck. Occasionally there are also horizontal rows of fingernail punctates impressed on the unsmoothed coils. Vertical applique strips or rows of nodes sometimes are present, usually placed directly in line with the rim peaks, if present. They may extend from the rim almost to the base; or be confined to either rim or body. Body decorations include: 2 or 3 rows of closely spaced horizontal fingernail punctates immediately below the neck; 4 or 5 triangles—with apexes down and bases coinciding with the juncture of rim and body—made either with punctates or applique strips and nodes; vertical applique strips in various arrangements.

CULTURAL AFFILIATIONS: A principal type of the Texarkana and McCurtain Foci.

DISTRIBUTION:

Geographical: Northeastern Texas and southeastern Oklahoma.

Temporal: Estimated, A.D. 1200-1500.

REMARKS: Appears closely related typologically to La Rue Neck Banded of the Titus Focus.

BIBLIOGRAPHY: Krieger, 1946, pp. 238-239 and pl. 35. Bell and Baerreis, 1951, pl. 10.

McKinney Plain

PASTE:

Method of manufacture: Coiled.

Temper: Clay grit.

Texture: Granular, fairly homogeneous, of small- to medium-sized particles. Well fired. Paste is unusually hard, so that sherds tend to shatter rather than crumble.

Color: Light shades of gray and brown, creams, and buffs. Core and interior surface frequently same color as external surface, although core is sometimes darker.

Surface finish: Both exterior and interior poorly smoothed.

FORM:

Wall thickness: 6 to 8 mm. average. Extreme range of 4 to 12 mm.

Lip: Flat or convex.

Base: Disk shaped.

Vessel shape and size: No complete specimens are available for study, but size, as indicated by sherds, is very large, most specimens probably being 25 to 50 cm. high. The body bulges slightly, and contracts a little at the neck. Rims are high and slightly flaring. Occurs mostly (or entirely) in the form of large jars.

DECORATION:

Treatment: Appliqueing, brushing, incising, and roughening.

Design: Four vertical applique strips, 4 to 10 mm. wide, are usually present. They are equally spaced, and may be either confined to the rim or extend from the lip to some point on the body. The strips are commonly flattened or pinched at short intervals. Sometimes vertical rows of elongated nodes replace the continuous strips. The rim is roughened and the body, between the applique strips, may be lightly brushed, covered with parallel incised lines, or left undecorated. Rarely, decoration may be entirely absent.

CULTURAL AFFILIATIONS: Indigenous type of the Texarkana Focus. Occurrence outside of Texarkana Focus components is obscure, due principally, perhaps, to lack of data.

DISTRIBUTION: *Geographical:* Includes Texarkana Focus area and may extend into southeastern Oklahoma, northwestern Louisiana, and southwestern Arkansas.

BIBLIOGRAPHY: Krieger, 1946, fig. 18, *a, b*, under Texarkana Focus.

Pease Brushed-Incised

PASTE:

Method of manufacture: Coiled.

Temper: Clay grit, occasionally with a small amount of bone.

Texture: Granular, fairly homogeneous, medium-sized particles. Medium hard; fairly well fired; usually friable.

Color: Surface colors are buffs, light grays, dark grays, and black, often variable due to uneven firing. Core is usually darker than surface.

Surface finish: Interior smoothed; exterior roughened.

FORM:

Wall thickness: Average 5 to 7 mm., extreme range 4 to 10 mm.

Lip: Sharply convex to flat.

Base: Flat and round.

Vessel shape and size: Ovoid jars with slightly out-flaring rims. Rims vary considerably in height. The widest part of the vessel is usually well down the body, and the upper part of the body is constricted to-

ward the neck. Oral diameter is usually less than the maximum diameter of the body. Most specimens are from 12 to 24 cm. high, no extremely large or small examples having been noted.

DECORATION:

Treatment: Appliqueing, punctating, incising, and brushing.

Design: A horizontal band of closely spaced punctates usually encircles the external surface at the lip. There is a similar band of punctates at the juncture of rim and body in most cases. The rim is decorated with heavy, horizontal brushing; or with straight incised lines laid horizontally, diagonally, or vertically; or with rows of closely spaced punctates. The body is divided into panels of apparently random sizes and shapes by either applique strips or rows of closely spaced punctates, or both. The panels are filled in with brushing, parallel incised lines, or parallel dashed lines with the dashes made by a "punch and drag" technique. One of the consistent characteristics of Pease is that the entire external surface, except for the base, is heavily decorated, so that there are no plain areas of sufficient size to stand out in contrast.

CULTURAL AFFILIATIONS: Indigenous type of the Bossier Focus. Present in small quantity at the Hatchel Mound, type site of the Texarkana Focus. Appears closely related to type Haley Complicated Incised of the Haley Focus, but decorations are not so elaborate as for that type. General design and some of the decorative techniques are reminiscent of type Sinner Linear Punctate of the Bossier Focus.

DISTRIBUTION:

Geographical: Includes Belcher and Texarkana Foci areas of northeastern Texas and northwestern Louisiana. Possibly occurs in southeastern Arkansas and southwestern Oklahoma.

Temporal: Estimated, A.D. 1200-1600.

BIBLIOGRAPHY: Webb, 1948, pp. 110-113.

Table 1 (p. 34) includes a list of complete vessels, mostly from the burials, and sherds from general digging. The most common types are Barkman Engraved,⁴ Pease Brushed-Incised, McKinney Plain, Nash Neck Banded, Dunkin Incised, late variant, and Baytown-like.

The validity of the type Dunkin Incised, late variant, in the present context is subject to an element of doubt. There are no complete Dunkin vessels nor any large sherds that might indicate with accuracy the exact nature of an entire vessel. There are, however, two complete vessels of type Pease Brushed-Incised (pls. 1, *e*, and 2, *a*) that have incised areas almost identical in pattern to Dunkin Incised. There is the possibility, therefore, that some or all of the sherds classified here as Dunkin are actually portions of Pease vessels (see Dunkin sherds, pl. 8, *h*, *i*). Webb (1948, pp. 118-121) in his excellent paper defining the Bossier Focus identifies a number of sherds as Dunkin Incised, late variant. Since Pease is common

⁴ Some of the sherds classified here as Barkman Engraved may actually be of the type Taylor Engraved. So far as decoration is concerned, Taylor is distinguished from Barkman mainly by the division of the decorated zone into separate panels; therefore unless a sherd of Taylor is large enough to contain about one-fourth of the decorated area of the vessel, it is impossible in some cases to distinguish it from Barkman. In the absence of complete vessels that can definitely be identified as Taylor, the sherds from the Texarkana sites were all tabulated as Barkman.

in the sites investigated by Webb, some of the supposed Dunkin sherds there may also be portions of Pease vessels. Some of them, however, are undoubtedly from Dunkin vessels, since complete vessels of that type were found. For present convenience, the sherds from Knight's Bluff will be referred to as Dunkin Incised, late variant, with the qualification that some, or all, may actually be derived from vessels of type Pease Brushed-Incised.

A relatively large number of plain sherds (284 including 7 rimsherds) are indistinguishable from the predominant ware at the Snipes Site, designated Baytown-like because of its similarity to type Baytown Plain of the Lower Mississippi Valley. While some of the sherds from Knight's Bluff (pl. 9, *g*, *h*, *k*) that were classified as Baytown-like may actually be portions of Nash Neck Banded vessels (Nash approaches Baytown-like in paste characteristics), several basal sherds exhibit the characteristic Baytown-like thick base with a sharp angle at the exterior juncture of base and vessel wall, and heavy reinforcement of the interior juncture—features not present in Nash Neck Banded. No decorated sherds with incised lips or overhanging incised lines on the rim (such as those of Baytown-like paste at the Snipes Site) were found at Knight's Bluff. However, there are several sherds (pl. 10, *o*) showing parallel, incised lines which are at least suggestive of the type Coles Creek Incised. They are of Baytown-like paste and some of them probably are from the same vessels as some of the Baytown-like body and basal sherds.

Mention should be made of three sherds (pl. 7, *f*), from at least two different vessels, which have all the characteristics of Barkman Engraved carinated bowls including design motif, except that they are incised rather than engraved. It is of interest to note that Moore (1912, fig. 2, p. 553) illustrates a complete carinated bowl, from burial No. 2 at the Haley Site, which is identical to Barkman except that part of the decoration is incised.

In determining which are the resident pottery types of the Knight's Bluff Site, several factors were taken into consideration. First, those types which are most numerous and more or less evenly distributed over the site are considered resident types. They are Barkman Engraved, Pease Brushed-Incised, Nash Neck Banded, McKinney Plain, Dunkin Incised, late variant, and Baytown-like. Types consistently accompanying burials as mortuary offerings are also probably of resident types for the most part, the possibility that some of the Knight's Bluff burials are intrusive seeming remote in view of the similarity in burial customs reflected by all of the 10 burials. Of the types listed above as resident types on the basis of quantitative representation, only Pease and Nash occurred in burials. Other vessels accompanying burials include a small carinated bowl

(pl. 2, *b*), found with burial No. 7, which resembles Barkman Engraved in shape, but has an engraved design in which negative elements are emphasized. It probably can best be classified as Friendship Engraved of the Mid-Ouachita Focus.

Two bottle forms found in burials are rather distinctive in style. Data from Knight's Bluff and other sites indicate that both probably merit status as types, but too few data are presently available for detailed description. Consequently, they will be herein assigned type names for convenience in reference, but are considered only tentative types. Descriptions of these two tentative bottle types are given below.

Haley Engraved.^{*}—Named and first recognized as a probable type by Krieger (oral communication), but has not yet been described in print. A medium-sized bottle of paste resembling that of Barkman Engraved. Body is squat, globular, or ovoid, and the base is flat. Necks are cylindrical or slightly tapering, and frequently flare outward at the lip. Decoration is confined to the body and consists largely of scrolls and circles, the scrolls frequently interlocking. One diagnostic feature of this tentative type is the use of heavily spurred lines, with hachuring in the triangular spur zones. Small spaces left over after the scrolls or circles have been applied are frequently hachured, probably to maintain a tendency to cover the body as completely as possible with designs. Two or three horizontal engraved lines just below the neck and just above the base delineate the decorated area.

Two examples of Haley Engraved (pls. 1, *a*; 2, *d*) were found at Knight's Bluff, one in burial No. 2, the other in burial No. 9. Possibly related to Haley Engraved, but with somewhat divergent design motifs, are two larger bottles (pls. 2, *f*; 3, *b*) found with burials 10 and 11.

Antioch Engraved.—The second of the two tentative bottle types is small in size and careless in execution. The paste is dark and friable, the body ovoid, the base flat, and the neck cylindrical or slightly tapering, with no flare at the lip. Observed specimens frequently have such a drastic list that they appear in danger of toppling at the gentlest breeze. Poor craftsmanship is reflected not only in vessel shape but also in the decoration, which consists of grotesque, disorderly patterns of circular, curved, and straight engraved lines. Spurring and ticking do not occur, but there is some crude hachuring.

Burials Nos. 2, 4, and 7 each contained one Antioch Engraved bottle (pls. 1, *d*, *f*; 2, *c*), and general digging uncovered four sherds (pl. 7, *b*).

Principal resident pottery types at the Knight's Bluff Site, then, are Barkman Engraved, Pease Brushed-Incised, Nash Neck Banded, McKinney Plain, Dunkin Incised, late variant, and Baytown-like. Of less frequent occurrence, but also considered as probable resident types, are the two tentative bottle types, Haley Engraved and Antioch Engraved.

^{*}AUTHOR'S NOTE. Haley Engraved has now been described in detail by Subm et al. (1954, p. 284, pl. 26).

Several other recognized pottery types, although poorly represented at Knight's Bluff, might be considered minor resident types because they consistently occur in association with some of the principal resident types at nearby related sites. One group of these consists of types considered indigenous to the Texarkana Focus: Cass Applied (24 sherds found at Knight's Bluff), Simms Engraved (7 sherds), Foster Trilled-Incised (6 sherds), Avery Engraved (3 sherds), Hatchel Engraved (2 sherds), Bowie Engraved (1 sherd), and rattle bowls (3 sherds). Two types affiliated with the Belcher Focus, Belcher Ridged (10 sherds), and Belcher Engraved (2 sherds) were found.

The only other types identified are 13 sherds of Pennington Punctated-Incised (an Alto Focus type), 6 sherds of Crockett Curvilinear Incised (a type shared by the Alto and Haley Foci), and one sherd of a tentative bottle type, Higgins Engraved, briefly described in this report on page 61.

Other ceramic artifacts are 16 fragments of pipes (pl. 11, *b, e, f, g, i*) and 1 fragment of what appears to have been an earspool (pl. 11, *j*). Fifteen of the pipe fragments are from long-stemmed, thin-walled pipes similar to those pictured by Moore (1912, fig. 53, p. 549) from the Haley Site, by Webb and Dodd (1939, pl. 26) from the Gahagan Site, and by Newell and Krieger (1949, fig. 53, p. 149) from the Davis Site. The other pipe fragment (pl. 11, *i*) is apparently from one of the thick-walled elbow pipes typical of many Fulton Aspect components.

CHIPPED STONE

Dart points (pl. 11).—A total of 54 dart points was found at Knight's Bluff. Twenty-three of them are of the Gary type (Newell and Krieger, 1949, p. 166), 10 are Ellis (*ibid.*, pp. 166-167), 2 are Yarbrough (*ibid.*, p. 168), and the other 19 are of indeterminate type. All the dart point types are of widespread distribution in the Caddoan Area, both in space and time. They all seem to occur in Archaic components as well as in both the Gibson and Fulton Aspects.

Arrow points (pl. 11).—Seven arrow points were recovered, one each of the types Maud, Bassett, and Fresno, and four indeterminate fragments.

Maud is a triangular, unstemmed point with a V-shaped concavity in the base. It was first recognized as a type by Krieger, but has not been described in print.* Maud is thought to be a diagnostic trait of the Texarkana Focus.

Bassett is similar in most respects to Maud, but has a tiny pointed stem in the basal concavity. Also first recognized by Krieger, Bas-

*AUTHOR'S NOTE. Maud, Bassett, and Fresno are described in detail by Suhm et al. (1954).

sett has been briefly described by Webb (1948, p. 132). It occurs in components of the Texarkana, Belcher, Bossier, and Titus Foci.

Fresno is one of the arrow points affiliated with the Central Texas Aspect, and is also common in Henrietta Focus and Rockport Focus components. First recognized as a type by Kelley (1947, pl. 13), it has not yet been described. Fresno is a triangular, unstemmed point with a straight to slightly concave or convex base. One face is frequently left smooth and unchipped, and the general execution of many specimens is relatively crude for arrow points.

Blades.—Few blades that may have been used as knives were found. Two small, crude blades may have been used for either cutting or scraping purposes, while four expertly fashioned stemmed blades (pl. 12, *a-d*) may be knives or possibly spear points.* Three of the latter were found piled together in square N5-E120; the fourth was in burial No. 5. All are made of Arkansas novaculite. Similar blades occur frequently in both Gibson and Fulton Aspect components, often in caches of two or more specimens.

Drills (pl. 12).—Four chipped-stone drills were found, all medium-small in size. Two of them are stemmed and one is unstemmed; the other is a fragment too small for description. The blades have been sharpened by pressure flaking from both faces.

Scrapers (pl. 12, k and l).—The six scrapers are irregular spalls with one or more edges sharpened from one face. The scraping edges of most of them are sharp, and some may have been used for cutting purposes.

Small picks (pl. 13).—These interesting items are called "picks" for lack of a better name. They are shaped somewhat like hand axes, but are very small, ranging from 4 to 8 cm. in length. They are very crudely made and might well be classified as rejects if they did not occur so frequently in sites of the region. They were made by sharpening a small nodule of flint or chert to a point on one end by percussion chipping; the other end of the nodule was not altered. The implement was probably grasped in the hand by the smooth end and used for light picking or chopping. Eight specimens were found at Knight's Bluff.

GROUND STONE

Grinding slabs.—One fragment of a sandstone grinding slab was found. As nearly as can be determined from the fragment, grinding was performed with a circular motion.

Manos (pl. 13, d).—Of the four manos, two are unshaped cobbles, the other two have been pecked into an elongated shape with parallel sides and rounded ends. The two unshaped manos and one of the

*AUTHOR'S NOTE. These would now be classified as Pogo type spear points (Suhm et al., 1954, p. 398, pl. 78).

shaped ones have small, shallow depressions or "pits" on both faces.

Hones (pl. 13, e).—Two pieces of sandstone are grooved in such a manner as to suggest that they were used as hones for sharpening bone or wooden implements. The larger one has five parallel grooves on one face and one groove on the opposing face. The smaller one has three parallel grooves on one face, none on the other.

Miscellaneous ground stone artifacts.—A roughly spherical, sandstone ball (pl. 13, *f*), approximately 2 cm. in diameter, was found. Its use is unknown.

There is one full-grooved sandstone maul or hammerstone (pl. 13, *g*). It is relatively small for a maul—5 cm. long, 3.5 cm. wide, and 2.5 cm. thick—but there is evidence of considerable battering at both ends. It was probably hafted and used for some sort of light percussion, perhaps for crushing nutshells.

Fragments of hematite were encountered throughout the digging. Some of them have smooth facets, evidently a result of grating the red pigment for use in preparing paint.

POLISHED STONE ARTIFACTS

Celts.—Three celts (pl. 14, *a-c*) were found, one of them a thin, flat, elongated, waterworn pebble with one end chipped to a broad, convex edge that was then smoothed. The body is unworked. The specimen is 6.5 cm. long, 7 mm. thick, 4 cm. wide at the bit, and tapers slightly to a width of 3.3 cm. at the base. Similar celts made from flat, waterworn pebbles have been observed in collections from the vicinity of Texarkana.

One of the other celts is made of the hard grayish-green stone used so frequently for celts in the Caddoan Area. It is oval in cross section and tapers from a width of 4.1 cm. at the bit to 2.2 cm. at the rounded base. Thickness is 3 cm. and length 8 cm. The body has been pecked into shape but has not been polished; the bit is steep and well polished, the cutting edge slightly convex.

The third celt is a flat, angular specimen of hematite which has been polished all over. It is 6.1 cm. long, 3.6 cm. wide, and 1.5 cm. thick. The bit is steep and the cutting edge slightly convex.

Full-grooved axes (pl. 14, d).—Three full-grooved axes were found, all made of hematite. Two are too fragmentary for accurate description, but the third and smallest one is almost complete. It is well smoothed and polished, and striations from the smoothing abrasive are visible running laterally across both faces. It is a single-bitted ax with a poll at one end and a very smooth groove encircling the blade laterally. The groove is about 1.5 cm. wide, its center being 5 cm. from the bit end and 2.3 cm. from the poll end. Width at the poll end is 5.1 cm., and there is a slight taper from groove to bit, width at the bit being 4.7 cm. The cutting edge is

slightly convex and fairly sharp. Maximum thickness is 2.3 cm. and overall length is 7.3 cm. Many similar specimens have been found in the Caddoan Area, most of them, however, larger than the one described here.

Boatstone.—A piece of what seems to have been a keeled boatstone is made of a soft, gray marl (pl. 13, *h*). It was elongated, with parallel or slightly convex sides and rounded ends. The keel is 1.2 cm. wide. Deep scratches on the under side appear to represent initial efforts to hollow out a depression; that the hollowing out was not completed may indicate that the piece was discarded before completion—perhaps due to accidental breakage. Overall length of the whole specimen must have been approximately 6 cm. Maximum width is 3 cm. and the height, from base to highest portion of keel, is 1.9 cm.

MISCELLANEOUS STONE SPECIMENS

In addition to the three pitted manos mentioned above, there are seven other pitted stones. The stones are irregular and unshaped, ranging in weight from 1 to 5 pounds. The pits are on one or more faces of the stones, there usually being one pit to a face although there are two closely spaced pits in one instance. The pits are roughly circular, 2 to 3 cm. in diameter, and from 1 mm. to 1 cm. in depth. Use of the pitted stones is strictly conjectural, but it has been suggested that they may have been used as anvils for chipping stone implements or for cracking nuts.

One small quartz crystal was probably a charm. Quartz crystals occur commonly in Caddoan Area sites, probably having been obtained in the Ozarks.

BONE

Awls.—There are two sharpened bone implements possibly used as awls. One (pl. 14, *g*) is a long, curved fishbone with a polished distal end indicating considerable usage. Length, measured along the curve, is 12.5 cm. The other possible awl (pl. 14, *h*) is fashioned from a long bone of a deer and is 14.6 cm. in length. Scratches and polish on the sharpened distal end indicate much use; the proximal end is unmodified.

Flaking implements.—Two blunt-tipped implements (pl. 14, *f*), apparently used for pressure flaking of stone, were found. Both are made of deer ulnas, one a right ulna, the other a left one. In manufacturing flaking implements of this sort, the distal few inches of the ulna was cut off and discarded, and the tip of the remaining portion was worked to a convex edge, sometimes beveled from one face. The articular area of the ulna and the olecranon, left unchanged, provide a convenient grip for grasping the implement. Overall length of the one complete specimen from Knight's Bluff is 12 cm.

Bead.—One bone bead was found (pl. 14, *i*). It appears to have been fashioned from a deer metapodial by severing both ends. It is 2.1 cm. long and 1.4 cm. in diameter.

SHELL

Perforated mussel shells (pl. 14, *k*).—The 17 perforated mussel shells are all of a kind. They are medium-sized shells with a roughly circular perforation just below the hinge. The perforations are 2 to 3 cm. in diameter and were evidently punched into the shell. There are no tool marks, at any rate, to indicate that they were cut or drilled. Use of such perforated shells is uncertain, but a considerable distribution, in both time and space, in North America is indicated by archeological data.

Pendant.—A small, flat, mussel-shell pendant (pl. 14, *j*), with two closely spaced suspension holes near one end, lay at the neck of burial No. 7. It is perfectly plain, with no indication of an engraved design. Length is 2.9 cm., width 1.5 cm., and thickness 3 mm.

A tabulation follows of all artifacts from the Knight's Bluff Site.

TABLE 1.—All artifacts from the Knight's Bluff Site

CERAMICS:

Complete and restorable vessels:	Number
Pease Brushed-Incised (one each with burials Nos. 4, 5, 9, 10, and 11) -----	5
Nash Neck Banded (two from burial No. 2; one from general digging) -----	3
Haley Engraved (one each with burials Nos. 2 and 9) -----	2
Possible variants of Haley Engraved (one each with burials Nos. 10 and 11) -----	2
Antioch Engraved (one each with burials Nos. 2, 4, and 7) ----	3
Friendship Engraved (with burial No. 7) -----	1
Unclassified, engraved (with burial No. 11) -----	1
Unclassified, brushed (with burial No. 4) -----	1
Potsherds:	
Plain, clay-tempered body sherds -----	2,757
Plain, clay-tempered rimsherds -----	72
Plain, bone-tempered body sherds -----	105
Plain, bone-tempered rimsherds -----	3
Plain, shell-tempered body sherds -----	62
Plain, shell-tempered rimsherds -----	1
Plain, very sandy paste -----	6
Baytown-like body sherds, plain -----	277
Baytown-like rimsherds, plain -----	7
Barkman Engraved, carinated bowls -----	329
Barkman design, incised, carinated bowls -----	3
Bowle Engraved -----	1
Hatchel Engraved -----	2
Simms Engraved -----	7
Avery Engraved -----	3
Belcher Engraved, bottles -----	2

TABLE 1.—*All artifacts from the Knight's Bluff Site—Continued*

CERAMICS—Continued

Potsherds—Continued	<i>Number</i>
Haley Engraved	15
Antioch Engraved	4
Higgins Engraved	1
Pease Brushed-Incised	392
Nash Neck Banded	142
Dunkin Incised, late variant	86
McKinney Plain	219
Belcher Ridged	10
Pennington Punctated-Incised	13
Cass Appliqued	24
Foster Trailed-Incised	6
Crockett Curvilinear Incised	6
Crockett or Pennington	1
Coles Creek-like	8
Marksville Stamped	1
Rattle bowls	3
Engraved, not further classified	606
Brushed sherds, not further classified	594
Incised sherds, not further classified	328
Punctated sherds, not further classified	186
Applique sherds, not further classified	72
Miscellaneous sherds, unclassified	20
Long-stemmed, thin-walled pipe fragments	15
Short-stemmed, elbow pipe fragments	1
Earspools (?)	1

CHIPPED-STONE ARTIFACTS:

Dart Points:

Gray	23
Ellis	10
Yarbrough	2
Indeterminate	19

Arrow points:

Maud	1
Bassett	1
Fresno	1
Indeterminate	4

Blades:

Small, crude	2
Stemmed, well made (spear points?)	4

Drills	4
Flake scrapers	6
Small "picks"	8
Cores or rejects	2
Gouges	2
Indeterminate worked flint	8

GROUND-STONE ARTIFACTS:

Pitted manos	3
Unpitted manos	1
Grinding slabs	1
Sandstone hones	2
Small, full-grooved hammerstones	1
Small sandstone balls	1

TABLE 1.—*All artifacts from the Knight's Bluff Site—Continued*

POLISHED STONE ARTIFACTS:	<i>Number</i>
Celts, oval in cross section -----	1
Celts, rectangular in cross section -----	2
Hematite axes, full-grooved -----	3
Boatstones (?) -----	1
MISCELLANEOUS STONE SPECIMENS:	
Pitted stones -----	7
Hammerstones -----	1
Quartz crystals -----	1
Hematite pigment -----	9
BONE AND ANTLER ARTIFACTS:	
Bone awls -----	2
Tubular bone beads -----	1
Deer ulna flakers -----	2
Worked antler, indeterminate -----	1
SHELL ARTIFACTS:	
Perforated mussel shells -----	17
Pendant, plain, mussel shell -----	1
TOTAL -----	6,564

DISCUSSION AND CONCLUSIONS

The principal occupation at the Knight's Bluff Site was evidently by a small village of people over a period of several decades. Light prior occupation by nonceramic peoples is indicated, and there is the possibility that campers stopped over at the site from time to time after abandonment of the village.

Although evidence is scanty, the earlier occupation can be rather certainly related to that somewhat vague archeological manifestation termed the Southeastern Archaic, the East Texas equivalent of which has been briefly described under the name East Texas Aspect (Suhm et al., 1954, pp. 148-151). This preagricultural, preceramic culture is thought to have had an economy of hunting and gathering that resulted in seasonal nomadism. Consequently, the early Knight's Bluff occupation is not likely to have been a continuous residence by one group of people, but can be attributed, rather, to small groups of nomads who camped at the site intermittently, perhaps over a span of some centuries.

The Knight's Bluff Village (this term will henceforth be used in reference to the principal occupation of the site), on the other hand, was sedentary in character. This view is supported by the discovery of one permanent type house (and there are undoubtedly others not encountered during the excavations) and the relatively large quantity of ceramics. No direct evidence of agriculture was found, but, because the village seems to have been permanent in nature and because remains of agricultural products have been discovered in closely related sites, it can be safely assumed that agriculture was practiced.

A framework of Neo-American archeological complexes has been established for the Caddoan Area, consisting of two broad divisions, the Gibson and Fulton Aspects, and a number of affiliated foci. Recognition of these different complexes is based upon studies of distribution and associations of artifact types and other cultural traits. When the Knight's Bluff Village material is compared to the complexes of the various foci and aspects of the Caddoan Area, however, it is readily apparent that a neat assignment to one particular focus, as the foci have been defined, is not possible. Instead, there is a somewhat complicated mixture of types from several different focal complexes.

The following list is of pottery types thought to be resident types of the Knight's Bluff Village. Opposite each type is the focus (or foci) with which it is affiliated in the classification of Caddoan Area complexes established by Krieger, Webb, and others.*

<i>Resident types</i>	<i>Focal affiliations</i>
Nash Neck Banded -----	Texarkana and McCurtain Foci, Fulton Aspect.
McKinney Plain -----	Texarkana Focus, Fulton Aspect.
Barkman Engraved -----	Texarkana Focus, Fulton Aspect.
Pease Brushed-Incised -----	Bossier Focus, Fulton Aspect.
Dunkin Incised, late variant ---	Bossier Focus, Fulton Aspect, and Phase 3 of Alto Focus, Gibson Aspect.
Baytown-like -----	No affiliations noted in the Caddoan Area; probably related to types of the Coles Creek, Troyville, and Marksville complexes of the Lower Mississippi Valley.
<i>Minor resident types</i>	
Haley Engraved -----	Haley Focus, Gibson Aspect.
Belcher Ridged -----	Belcher Focus, Fulton Aspect.
Cass Appliqued -----	Glendora and Texarkana Foci, Fulton Aspect.
Simms Engraved -----	Glendora, Texarkana, and McCurtain Foci, Fulton Aspect.
Bowie Engraved -----	Texarkana and Mid-Ouachita Foci, Fulton Aspect.
Hatchel Engraved -----	Texarkana Focus, Fulton Aspect.
Foster Trilled-Incised -----	Texarkana and Belcher Foci, Fulton Aspect.
Avery Engraved -----	Texarkana, Glendora, and McCurtain Foci, Fulton Aspect.
Rattle Bowls -----	Frankston, Texarkana, and Titus Foci, Fulton Aspect.
Antioch Engraved -----	Fulton Aspect (?).

Examination of the list reveals that the only Gibson Aspect types that might be considered resident types are Dunkin Incised, late variant, of the Alto Focus, and Haley Engraved of the Haley Focus. Dunkin Incised, late variant, is also considered indigenous to the Bossier Focus, and consequently can be considered a Fulton Aspect type. (There is the possibility, it will be recalled, that some of the

*AUTHOR'S NOTE. The cultural affiliations listed here for some of the types are not exactly the same as those given by Suhm et al. Their suggested affiliations, based on extensive distribution studies, are undoubtedly more accurate than mine.

Dunkin sherds at Knight's Bluff and perhaps some of those from the Bossier Focus sites investigated by Webb, may be from Pease vessels.) Thus Haley Engraved is the only Gibson Aspect pottery type that may be resident, and it is at best only a minor resident type.

Pottery types, then, would seem to indicate that the Knight's Bluff Village is affiliated, by and large, with the Fulton Aspect. Further support of that supposition lies in the presence of some shell-tempered pottery (which is thought to have been introduced after the disappearance of the Gibson Aspect), two arrow points of the types Maud and Bassett (Maud having been identified with the Texarkana Focus, and Bassett with the Texarkana, Belcher, and Bossier Foci), and the general character of the site.

On the other hand, 15 of the 16 pipe fragments, representing at least 6 different pipes, are of the long-stemmed, thin-walled variety, thought to have disappeared by Fulton Aspect times. In addition, two Haley Engraved bottles occurred in burials, and two others may be related to Haley Focus forms. Furthermore, 13 Pennington Punctated-Incised sherds and 6 sherds of Crockett Curvilinear Incised were found, several of each type being in situ in the compact house floor midden in evident primary association with the principal resident types. Pennington is considered peculiarly an Alto Focus type, while Crockett is shared by the Alto and Haley Foci and is closely related to a Spiro Focus type, Keota Curvilinear Incised.

But, disregarding for the moment any suggestion of affiliation or contemporaneity with the Gibson Aspect, let us attempt to identify the Knight's Bluff material specifically with one or another of the Fulton Aspect Foci. In the list above correlating resident pottery types to foci, it will be observed that Texarkana Focus appears 10 times, Glendora Focus 3 times, McCurtain Focus 3 times, Belcher Focus 2 times, Bossier Focus 2 times, Mid-Ouachita Focus 1 time, Frankston Focus 1 time, and Titus Focus 1 time. First of all, Glendora, McCurtain, Mid-Ouachita, Frankston, and Titus can be eliminated because all of their types that are present at Knight's Bluff are types shared with the Texarkana Focus, the really unique and diagnostic types of all five of these foci being absent.

All pottery types belonging to the Texarkana complex are present at Knight's Bluff, but three of them—Avery Engraved, Simms Engraved, and Foster Trailed-Incised—are represented by only a handful of sherds. Barkman Engraved, McKinney Plain, and Nash Neck Banded, the other three Texarkana pottery types, are all major resident types at Knight's Bluff. The case for assigning the Knight's Bluff Village to the Texarkana Focus, then, is fairly strong, but would require enlargement of the Texarkana type inventory to include Pease Brushed-Incised and Baytown-like as major types. And

Dunkin Incised, late variant, Belcher Ridged, and the tentative types Haley Engraved and Antioch Engraved would also have to be included either as minor affiliates or as trade items.

Factors for and against assignment of the Knight's Bluff Village to either the Belcher or Bossier Focus, in sum, add up to much weaker relationships in both cases than in the case of Texarkana Focus; therefore, it hardly seems worthwhile to trace them in detail here.

The Knight's Bluff Village appears, then, to be essentially a component of the Texarkana Focus, with the addition of two major pottery types, Pease Brushed-Incised (also an integral type of the Bossier Focus) and Baytown-like (related to types of the Lower Mississippi Valley). Three pottery types of the Texarkana Focus—Avery Engraved, Simms Engraved, and Foster Trailed-Incised—are only sparsely represented. Krieger (oral communication) has observed that Simms Engraved was probably adopted at a relatively late date and did not reach full popularity until near the end of the Texarkana Focus, after which it continued as a major type of the Glendora Focus. Although possibly appearing earlier than Simms, Avery seems to have reached its peak of popularity in northeastern Texas with the Glendora Focus.* The history of Foster Trailed-Incised is more obscure, but its development may well have culminated in a similar type, Keno Trailed, of common occurrence in Glendora Focus components.

Thus two of the three Texarkana types that are poorly represented at the Knight's Bluff Village can be said to have appeared relatively late in the Texarkana Focus, and the third type, Foster Trailed-Incised, may have a similar temporal distribution. Therefore, it seems likely that the Knight's Bluff Village represents a segment in the earlier history of the Texarkana Focus.

In support of an alinement with early Texarkana Focus are the presence of long-stemmed clay pipes of Gibson Aspect form, which probably are survivals not yet replaced by the short-stemmed elbow pipes affiliated with later phases of the Texarkana Focus and the Glendora Focus. Other possible survivals from the Gibson Aspect, via the Haley Focus, are the types Haley Engraved and Crockett Curvilinear Incised. Since the Bossier Focus is generally considered to occupy a relatively early position in the Fulton Aspect, the presence in quantity of one of its major pottery types, Pease Brushed-Incised, is further corroboration of a comparatively early placement for the Knight's Bluff Village.

One note of discord is injected by the apparent association of Alto Focus type Pennington Punctated-Incised with the Knight's Bluff

*AUTHOR'S NOTE. Suhm et al. note the rare occurrence of both Simms and Avery with European trade material, but state that the two types belong mainly to the late prehistoric period.

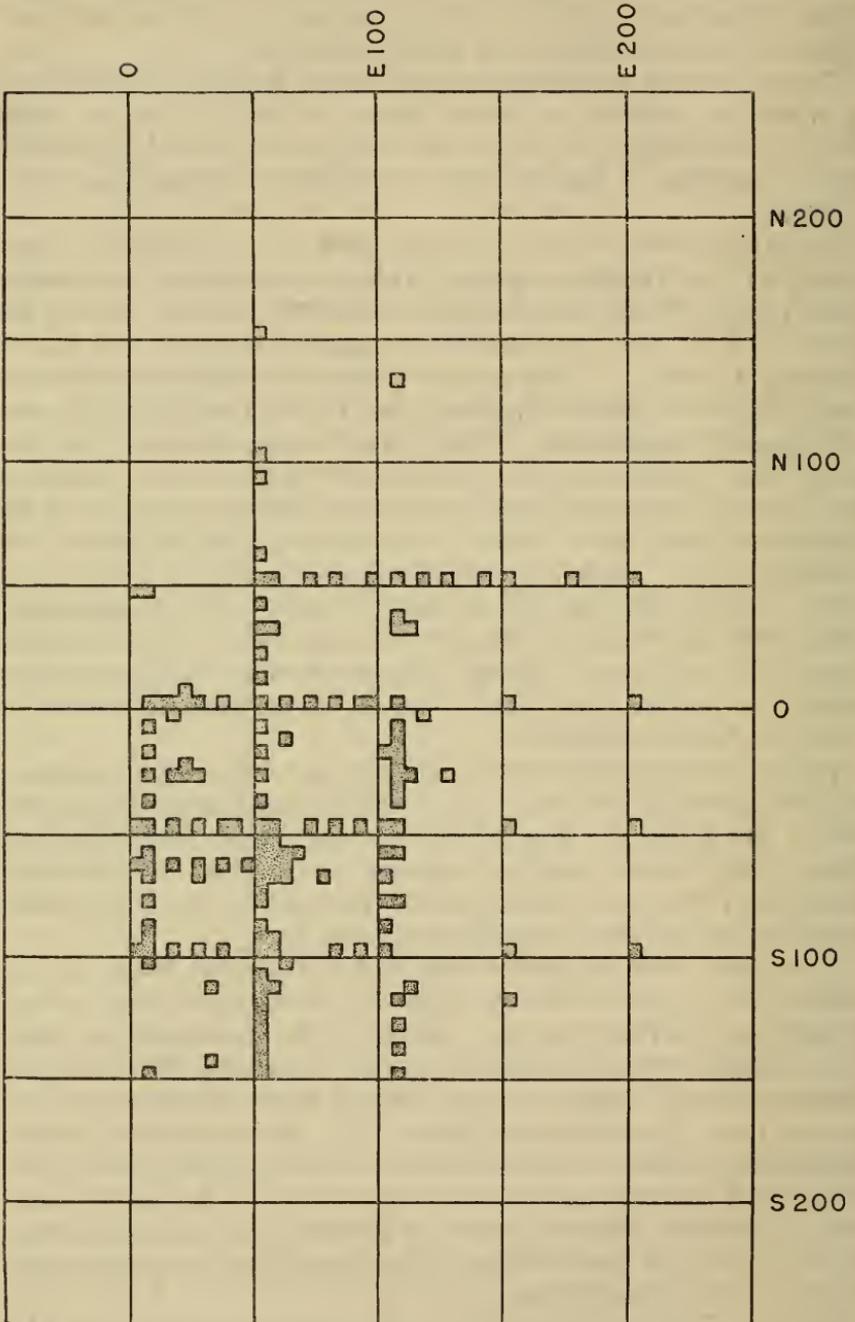


FIGURE 5.—Sketch map of Snipes Site, showing grid reference system. Stippling denotes excavated areas.

Village occupation. Barring some highly improbable set of circumstances by which a few vessels of that type might have survived for a considerable period of time as isolated heirlooms or museum pieces, there come to mind only two possibilities: (1) that the later phases of the Alto Focus were contemporaneous with the earliest part of the Texarkana Focus or (2) that Pennington outlived the Alto Focus, continuing as a minor type in subsequent complexes. The present writer, not having sufficient data at hand for accurate interpretation of the problem, is unable to give any sort of indication as to which of the two possibilities is more likely.

Of particular interest, in view of long-standing differences of opinion regarding temporal alinement of Caddoan and Lower Mississippi complexes, is the occurrence at Knight's Bluff, in some quantity, of what appears to be a characteristically Lower Mississippi ware, termed Baytown-like. Since the Snipes and Sherwin Sites, described later in this report, yielded significant data concerning this problem, further discussion will be postponed until the final section.

THE SNIPES SITE (41-20D4-3)

The Snipes Site lies on the long northern slope of a low hill, approximately a mile south of the Sulphur River and 100 yards east of State Highway 8 between Maud and Douglassville. It is well known to local collectors who have picked up hundreds of artifacts from the surface. During his preliminary survey of the Texarkana area, Stephenson was guided to the Snipes Site by Bogie Price. They found surface indications consisting of flint chips, mussel shells, bone scraps, flecks of charcoal, potsherds, and other artifacts scattered over an area of 6 or 7 acres. The hillside on which the site is located is at the edge of the upland overlooking the Sulphur River bottom to the north.

The excavations at Snipes were begun May 27, 1952, and continued through June 5. A grid type reference system similar to the one employed at Knight's Bluff was established, and test squares were sunk at 50-foot intervals. Trenches or rows of alternate 5-foot squares were then excavated across the most promising areas, and, in some cases, additional squares were opened adjacent to the most productive test squares. Figure 5 indicates the squares that were excavated.

The basal geological formation was a reddish, compact clay (stratum 1) lying 8 to 15 inches below the surface and extending to unknown depth. Overlying stratum 1 was the surface member of gray sand (stratum 2) in which were found all of the cultural remains. The cultural material was dispersed throughout the upper portion of stratum 2, extending almost down to stratum 1 in the central part of the site and lensing out gradually toward the edges.

(Position of the strata is shown in fig. 6.) Stratum 1 was completely sterile of cultural remains. The occupational zone ranged in thickness from 3 or 4 to about 15 inches and, since the site lies in an old field which has been cultivated more or less continuously for about three-quarters of a century, it had been greatly disturbed by plowing. Even the burials were only a few inches deep, and several concentrations of badly scattered, broken human bones indicated that some burials were completely destroyed by the plow.

No house patterns or other prominent features were encountered except for the burials, possibly because cultivation may have destroyed any that were present. The cultural zone was fairly homogeneous, the only differentiation being a heavier, thicker concentration in the central portion of the site and several small spots where a great deal of carbon and grease had cemented the sand of stratum 2 into relatively compact layers. Most of the animal bones were found in the vicinity of these compact spots, which bolsters the suspicion that the spots are remnants of small refuse heaps which have been almost completely destroyed by plowing.

On January 14, 1954, approximately 1½ years after the excavations described above, the writer revisited the Snipes Site with Ed Moorman and Bogie Price. A bridge across the Sulphur River just below the site was being raised so as to clear the waters of Texarkana Reservoir, and earth-moving operations, which had been carried on at the Snipes Site in connection with construction of the bridge, had scraped portions of stratum 2 off most of the occupation area. A small pile of human skull fragments was found on the scraped surface, and excavation exposed a burial that had been struck by the bulldozers. This burial was designated as burial No. 7, the next number in the sequence begun in the previous excavations. Subsequently, Bogie Price found two more burials, Nos. 8 and 9, and a complete pottery vessel that was apparently not associated with a burial. Description and analysis of the three additional burials and the vessel are included herein with the previously acquired data.

BURIALS

Several areas containing scraps of human bones—apparently the remains of burials badly scattered by the plow—were so ill-defined that their original placement could not be determined. The nine relatively undisturbed burials were just a few inches beneath the surface of the ground, and all had been disturbed to more or less extent. Two were single flexed inhumations without offerings of nonperishable nature; the other seven were of the extended type, one being a multiple burial of three individuals, another containing two individuals, and five being single burials. Five graves contained mortuary offerings.

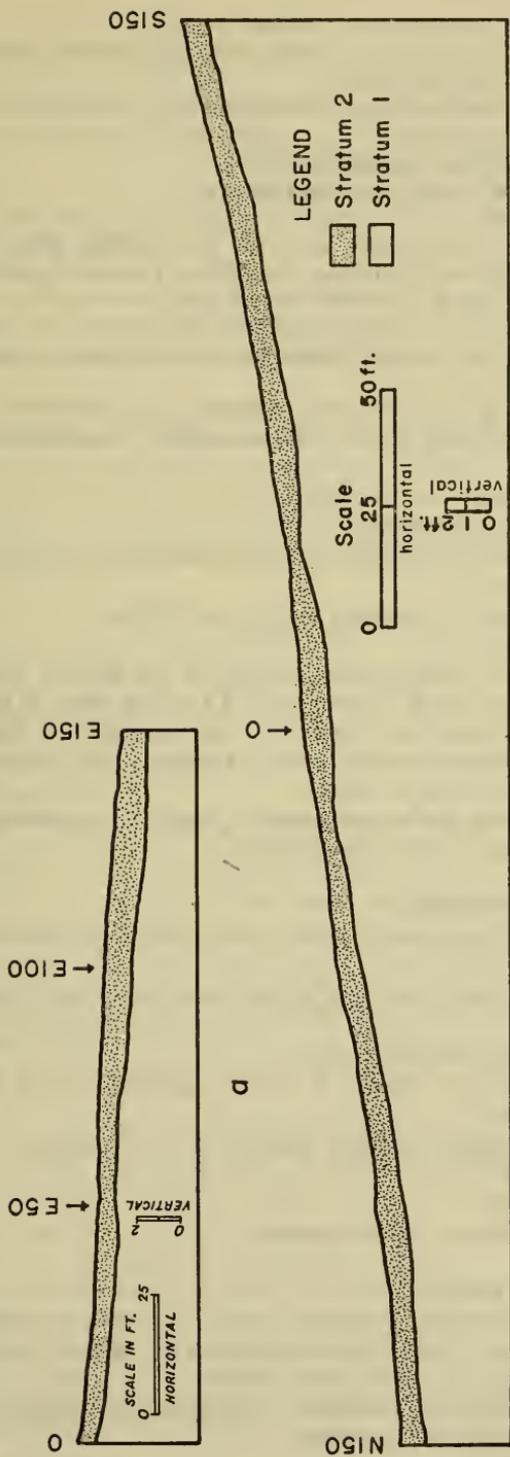


FIGURE 6.—Profiles, Snipes Site. *a*, Idealized east-west profile at line 0; *b*, idealized north-south profile at line E50.

BURIAL No. 1:

Location: Squares S65-E50 and S70-E50.

Grave dimensions: Indeterminate except for depth, which was about 10 inches below the present surface.

Type of burial: Contained three individuals, all extended on the back.

Orientation: Heads to south.

Dimensions of skeletons: Indeterminate.

Completeness: Feet, arms, and trunks missing.

Preservation: Poor.

Associations: One plain pottery vessel of Baytown-like paste (pl. 4, a) containing 22 flint chips, 2 pieces of hematite, 1 piece of petrified wood, and 1 small flint drill; 1 greenstone celt (pl. 13, i).

Physical observations and measurements: Two adults, one adolescent. Preservation too poor for measurements or other observations.

BURIAL No. 2:

Location: Squares S95-E50, S95-E55, S100-E50, and S100-E55.

Grave dimensions: Depth, 9 inches below surface; other dimensions indeterminate.

Type of burial: Flexed, on left side.

Orientation: Head to southeast.

Dimensions of skeleton: Length, 54 inches; maximum width, 26 inches; thickness, 8 inches.

Completeness: Fragments of most major bones present.

Preservation: Poor.

Associations: A few inches to the left side of the skeleton was a round depression, 14.5 inches in diameter and 5.5 inches deep, in the floor of the grave. It was partially filled with badly deteriorated, black, fibrous material. This may be the remains of a basket or other vegetal artifact, but identification cannot be certain.

Physical observations and measurements: Adult. Preservation too poor for measurements or other observations.

BURIAL No. 3:

Location: Square S100-E5.

Grave dimensions: Depth below surface, 14 inches; other dimensions indeterminate.

Type of burial: On back with legs loosely flexed to the right; arms folded across chest.

Orientation: Head to north-northwest.

Dimensions of skeleton: Length, 47 inches; maximum width, 20 inches; thickness, 7 inches.

Completeness: At least vestiges of most major bones present.

Preservation: Fair.

Associations: None.

Physical observations and measurements:

Sex: Male.

Age: 45 to 50 years.

Cranial measurements: Maximum length, 165 mm.; maximum width, 154 mm.; index, 93.3 (hyperbrachycranic); minimum frontal diameter, 82 mm.; bigonial diameter, 98 mm.

General observations: Prominent continuous brow ridges; no prognathism; widely flaring malars.

BURIAL No. 4:

Location: Square S150-E50.

Grave dimensions: Indeterminate except for depth, which was about 6 inches below the surface.

Type of burial: Apparently extended on the back.

Orientation: Head to southwest.

Dimensions of skeleton: (Approximate) maximum length, 50 inches; maximum width, 15 inches; thickness, 6 inches.

Completeness: Vestiges of most major bones present.

Preservation: Poor.

Associations: None.

Physical observations and measurements: Child. Other observations and measurements indeterminate.

Remarks: Badly disturbed and scattered.

BURIAL No. 5:

Location: S50-E50 and S55-E50.

Grave dimensions: Depth, 4 inches; other dimensions indeterminate.

Type of burial: Apparently extended on the back.

Orientation: Head to southwest.

Dimensions of skeleton: Indeterminate.

Completeness: Fragments of most major bones present.

Preservation: Poor.

Associations: None.

Physical observations and measurements: Adult. Other observations and measurements indeterminate.

Remarks: Very badly disturbed and scattered.

BURIAL No. 6:

Location: Square S65-E60.

Grave dimensions: Depth, 14 inches below the surface; other dimensions indeterminate.

Type of burial: Extended, on back.

Orientation: Head to northeast.

Dimensions of skeleton: Indeterminate.

Completeness: Vestiges of most major bones present.

Preservation: Very poor.

Associations: A medium-sized, barrel-shaped pottery vessel (pl. 4, b), of type Coles Creek Incised, lay at the right shoulder.

Physical observations and measurements: Adult. Other observations and measurements indeterminate.

Remarks: Only traces of bones remained.

BURIAL No. 7:

Location: In northeastern part of site.

Grave dimensions: Indeterminate except for depth which was approximately 12 inches below the surface.

Type of burial: Extended, on back.

Orientation: Head to south-southeast.

Dimensions of skeleton: Not recorded.

Completeness: Traces of most major bones present.

Preservation: Poor.

Associations: A small, plain, simple bowl (pl. 4, c) of Baytown-like paste, with convex walls and rounded base, lay at the left shoulder.

Physical observations and measurements: Adult. Other observations and measurements indeterminate.

BURIAL No. 7—Continued

Remarks: Burials Nos. 7, 8, and 9 were discovered in January 1954, after the reference points had been destroyed by the earth-stripping operations of the Texas Highway Department. Therefore these burials were not located in reference to the grid system used in the principal excavations. Neither were exact dimensions of the graves and skeletons recorded; and other observations are not available in some instances.

BURIAL No. 8:

Location: In northeastern part of site, a few feet south of burial No. 7.

Grave dimensions: Not recorded, but grave was shallow.

Type of burial: Contained two individuals, both extended on the back.

Orientation: Heads to south-southeast.

Dimensions of skeletons: Not recorded.

Completeness: Not recorded.

Preservation: Poor.

Associations: A small, plain bowl (pl. 4, *d*) of Baytown-like paste at left shoulder.

Physical observations and measurements: None recorded.

BURIAL No. 9:

Location: In northeastern part of site.

Grave dimensions: Not recorded, but grave was shallow.

Type of burial: Not recorded.

Orientation: Not recorded.

Dimensions of skeleton: Not recorded.

Completeness: Not recorded.

Preservation: Poor.

Associations: One small bowl (pl. 4, *e*) of Baytown-like paste with everted rim.

Physical observations and measurements: None recorded.

THE ARTIFACTS

The 1,205 artifacts recovered from the Snipes Site are different in many respects from those of Knight's Bluff and Sherwin, although several types occur at all three sites. Most of the pottery is stylistically of the Lower Mississippi tradition, but Caddoan styles are also present. Thus the Snipes Site appeared at first to offer an excellent opportunity for alining Caddoan and Lower Mississippi complexes. However, the cultural deposits were so shallow and had been so disturbed by cultivation that the relationships between the Caddoan and Lower Mississippi material could not be determined with certainty.

After the first test pits had confirmed the fact that pottery of both traditions was present, an effort was made to locate undisturbed areas where stratigraphic separation of the two complexes might exist. Unfortunately, no such areas were found. When burials containing Lower Mississippi vessels were encountered, the areas beneath the grave floors were carefully examined for the purpose of ascertaining if any Caddoan material lay beneath the graves and could therefore be shown to be earlier than the Lower Mississippi burials. Both Caddoan and Lower Mississippi sherds were found in the grave fill material (which had been disturbed by the plow in

every case) down to the grave floors, but the burials had been dug entirely through the occupational zone and no cultural material of any kind occurred beneath the graves.

Analysis in the laboratory indicates that the distribution patterns of the two different ceramic traditions at Snipes are similar, with concentrations in the central portion of the excavated area and a thinning out peripherally. No differences in vertical distribution were detected. The only suggestion of differentiation is the relative frequency of Caddoan sherds, as compared with Lower Mississippi sherds, in the eastern portion of the site. Actually, both kinds are scattered very thinly in that area, and the comparative frequency of Caddoan material may not be particularly significant. This slightly different intrasite distribution does suggest some differences in the cultural affiliations of the two ceramic traditions within the site—as was to be expected—but does not clarify the question of whether the Caddoan material represents a separate occupation of the site, is present as trade material, or represents accretions to a basically Lower Mississippi complex.

CERAMICS

The predominant pottery style at Snipes has a thick, friable paste with chalky exterior. It appears to be identical with the type Baytown Plain (Phillips, Ford, and Griffin, 1951, pp. 76-82) in paste characteristics with the exception that Baytown evidently is never bone tempered while 33.7 percent of the Snipes sherds contain angular fragments of bone in addition to clay particles. Because of the bone tempering and other factors, the Snipes specimens will not be definitely identified as Baytown Plain; however, similarity to Baytown is so close that separation as an entirely different type is not warranted. Consequently this pottery will herein be termed Baytown-like.*

Baytown Plain is the basic clay-tempered type for the Lower Mississippi area from the Tchefuncte Period to the beginning of the Plaquemine Period (or the period G-C in the chronology of Phillips, Ford, and Griffin). In addition to plain vessels, many decorated pottery types of the Marksville, Troyville, and Coles Creek Periods are also of Baytown paste.

Color of Baytown-like, the comparable type at the Snipes Site, ranges from light buffs (occasionally tinged with orange) through creams and browns to grays. Surfaces are smoothed, but bumpy,

*AUTHOR'S NOTE. Since this paper was written I have examined specimens of Williams Plain pottery from Fourche Maline sites in eastern Oklahoma that are similar in paste characteristics to what is here called Baytown-like. The vessel shapes of Williams Plain, though, are somewhat different from the Baytown-like ware found at Texarkana as nearly as can be determined from the sherds. Both kinds of pottery, in any event, appear to be related to the Baytown series of the Lower Mississippi Area.

with a chalky feel, and tool marks are frequently visible. The paste is heavily tempered with small- to medium-sized particles of clay, sometimes with the addition of bone fragments, and cores are usually darker than surfaces. Wall thickness ranges from 6 to 13 mm., with an average near 9 mm. Principal vessel shape, as indicated by sherds, is a large, barrel-shaped or cylindrical form with a flat, round base, or rarely with a square base. Juncture of the base and wall is often reinforced on the interior; the exterior juncture forms a sharp angle. Rims are vertical to slightly incurved or outcurved, and lips may be flattened (39.6 percent) or convex (60.4 percent).

Other than the 813 specimens of Baytown-like (including the complete vessels), there are only 24 sherds and 1 complete vessel of Lower Mississippi types. The vessel (pl. 4, *b*), from burial No. 6, and 21 of the sherds (pl. 10) are of the type Coles Creek Incised (Ford, 1951, pp. 74-76), 2 sherds (pl. 10, *f*) have been tentatively identified as Marksville Incised (Ford and Willey, 1940, p. 78), and 1 sherd (pl. 10, *e*) is thought to be of the type Evansville Punctated (Phillips, Ford, and Griffin, 1951, pp. 90-91). All of these are of Baytown-like paste, but walls tend to be thinner and paste somewhat harder than in most of the Baytown-like sherds. Some of the plain sherds classified as Baytown-like undoubtedly came from the bodies of vessels with decorations such as these on the rims.

A total of 290 sherds was classified as Caddoan, although only 9 of them could be definitely identified as to type. The identified types are Barkman Engraved, Simms Engraved, Pease Brushed-Incised, Cass Appliqued, Pennington Punctated-Incised, Crockett Curvilinear Incised, and Holly (or Spiro) Fine Engraved. There are 3 sherds of Barkman, 1 sherd each of the others.

One fragment of a long-stemmed, thin-walled clay pipe (pl. 11, *a*) was found.

Of the various pottery types present, only Baytown-like and Coles Creek Incised can be designated as resident types of the principal occupation with any degree of certainty. This does not mean, however, that none of the other types are resident; in fact, the mere presence of sherds that are probably Marksville Incised and Evansville Punctated so far from their normal centers of distribution suggests direct affiliation with Baytown-like and Coles Creek Incised, which are also Lower Mississippi types of the Baytown Period and also strangers in the Caddoan Area. As pointed out above, the relationship of the Caddoan pottery to the Lower Mississippi occupation is not clear. It may be trade material in a basically Lower Mississippi component, or it may represent an entirely different occupation of the site—either before or after occupation by the Lower Mississippi affiliates.

NONCERAMIC

Nonceramic artifacts are similar in general to those at Knight's Bluff and Sherwin except that arrow point type Alba is more frequent at Snipes. All the artifacts are listed in table 2; types and forms that were described for Knight's Bluff are not redescribed here. Brief descriptions follow of two projectile point types not found at Knight's Bluff.

The seven Alba points (pl. 11) are good examples of the type as described by Krieger (Newell and Krieger, 1949, pp. 161-162). They are small with bulbous stems, and several have characteristically outflaring barbs.

One dart point (pl. 11, *t*) of Paleo-American form was found in the upper part of stratum 2. Maximum width (1.6 cm. above the base) is 2.7 cm., overall length approximately 6 cm. (the tip is missing), and maximum thickness is 7 mm. The base is almost straight, but has a suggestion of concavity, and the lateral edges have been smoothed up to the point of maximum blade width. This specimen is probably of the Plainview type (Krieger, 1947) or closely related thereto. Its presence at the Snipes Site is very likely intrusive.

The only nonceramic artifact type found in sufficient quantity to suggest status as a resident type is Alba arrow point. Distribution of Alba extends from the Brazos River eastward as far as the Mississippi Valley where it is found in association with complexes of the Baytown Period (Ford, 1951, pp. 115-117).

TABLE 2.—All artifacts from the Snipes Site

CERAMICS:

<i>Complete and restorable vessels:</i>	<i>Number</i>
Plain, flower-pot-shaped, Baytown-like paste (with burial No. 1) ..	1
Plain bowl with rounded base, convex walls, and incurving rim, Baytown-like paste (with burial No. 7)	1
Plain bowl with flat, round base and straight walls slanting outward, Baytown-like paste (with burial No. 8)	1
Plain bowl with flat, round base and everted rim, Baytown-like paste (with burial No. 9)	1
Coles Creek Incised (with burial No. 6)	1
Small bowl with rounded base and slightly everted rim. Short, diagonal, incised lines applied from lip to base and one horizontal row of punctates encircles the neck. Caddoan paste; apparently not associated with a burial.....	1
 <i>Potsherds:</i>	
Baytown-like, clay tempered	605
Baytown-like, bone tempered	204
Coles Creek Incised	21
Evansville Punctate (?)	1
Marksville Incised (?)	2
Barkman Engraved	3

TABLE 2.—*All artifacts from the Snipes Site—Continued*

CERAMICS—Continued	
<i>Potsherds—Continued</i>	<i>Number</i>
Simms Engraved	1
Pease Brushed-Incised	1
Cass Appliqued.....	1
Pennington Punctated-Incised.....	1
Crockett Curvilinear Incised	1
Pennington or Crockett	1
Holly, or Spiro, Fine Engraved	1
Plain, indeterminate	155
Brushed, indeterminate	22
Incised, indeterminate	60
Engraved, indeterminate	37
Appliqued, indeterminate	3
Punctated, indeterminate	3
Miscellaneous, unclassified	12
Long-stemmed, thin-walled pipes.....	1
CHIPPED-STONE ARTIFACTS :	
<i>Dart points:</i>	
Gary	10
Ellis	1
Yarbrough	1
Plainview (?)	1
Indeterminate	10
<i>Arrow points:</i>	
Alba	7
Indeterminate	4
Small, crude blades	5
Flake scrapers	4
Small "picks"	1
Small, unstemmed drills	5
Indeterminate worked flint	4
GROUND- AND POLISHED-STONE ARTIFACTS :	
Grinding slabs	1
Manos	2
Hones	1
Polished hematite fragment	1
Greenstone celt, oval in cross section (with burial No. 1).....	1
MISCELLANEOUS :	
Hammerstones	2
Polished antler tips	1
Worked mussel shell	1
TOTAL	1,205

DISCUSSION AND CONCLUSIONS

Principal occupation at the Snipes Site was by a group of people closely allied with the Baytown Period of the Lower Mississippi Valley. Caddoan pottery roughly contemporaneous with the Knight's Bluff and Sherwin components was also present, but its exact relationship to the Lower Mississippi occupation is not clear because of the disturbed condition of the site. Lower Mississippi pottery types

are Baytown-like, Coles Creek Incised, and possibly Marksville Incised and Evansville Punctated. Caddoan ceramics include the types Barkman Engraved, Simms Engraved, Pease Brushed-Incised, Cass Appliqued, Pennington Punctated-Incised, Crockett Curvilinear Incised, and Holly (or Spiro) Fine Engraved.

Temporal alinement of the Snipes component with the Lower Mississippi chronology will be attempted, partly by comparisons with Ford's seriation graphs (Ford, 1951 and 1952). Reference to figure 7, which shows the Lower Mississippi chronology as it is now envisioned, will be of help in following the discussion.

Baytown Plain is the basic type of the Lower Mississippi Period G-C. Principal means of differentiating the various complexes of that period is through decorated pottery types, many of which are made of Baytown paste. Unfortunately, most of these decorated types are entirely absent from the Snipes Site, which makes alinement with the Lower Mississippi Area especially difficult. Baytown Plain, being a generalized type occurring over a large area and through a long span of time, includes—or is very closely related to—the types Tchefuncte Plain, Marksville Plain, Troyville Plain, and Coles Creek Plain. Comparison of those types with Baytown-like from the Snipes Site should help determine the closest Lower Mississippi counterparts of Baytown-like and therefore tie it into the Lower Mississippi chronology.

First of all, Tchefuncte Plain can be eliminated as a possible counterpart since sand tempering and legged vessel forms, which are almost invariable features of Tchefuncte pottery, are not present at Snipes. This leaves Marksville Plain, Troyville Plain, and Coles Creek Plain as possibilities. Strictly on the basis of typology, differences among those three types are principally of vessel form. Shapes of the Snipes vessels, as indicated by four complete vessels and numerous sherds, are of generalized styles occurring in all three of the Lower Mississippi Valley periods concerned. Hardness and wall thickness, however, are considered by Ford (1951) to be of diagnostic value in distinguishing between Troyville Plain and Coles Creek Plain. Wall thickness of Troyville Plain ranges from 7 to 11 mm., with an average of 9 mm.; thickness of Coles Creek Plain is not specified, but is said to be noticeably less than that of Troyville Plain (Ford, 1951, pp. 67-68). Coles Creek Plain is harder than Troyville Plain. The Baytown-like pottery from Snipes ranges in wall thickness from 6 to 13 mm., with an average of approximately 9 mm. This compares favorably with Ford's description of Troyville Plain, but appears too thick for Coles Creek Plain. Average hardness of Baytown-like is slightly over 2.0, almost identical to the average for Troyville Plain, but too soft for Coles Creek Plain. Wall thickness and hardness, then, relate Baytown-like to Troyville

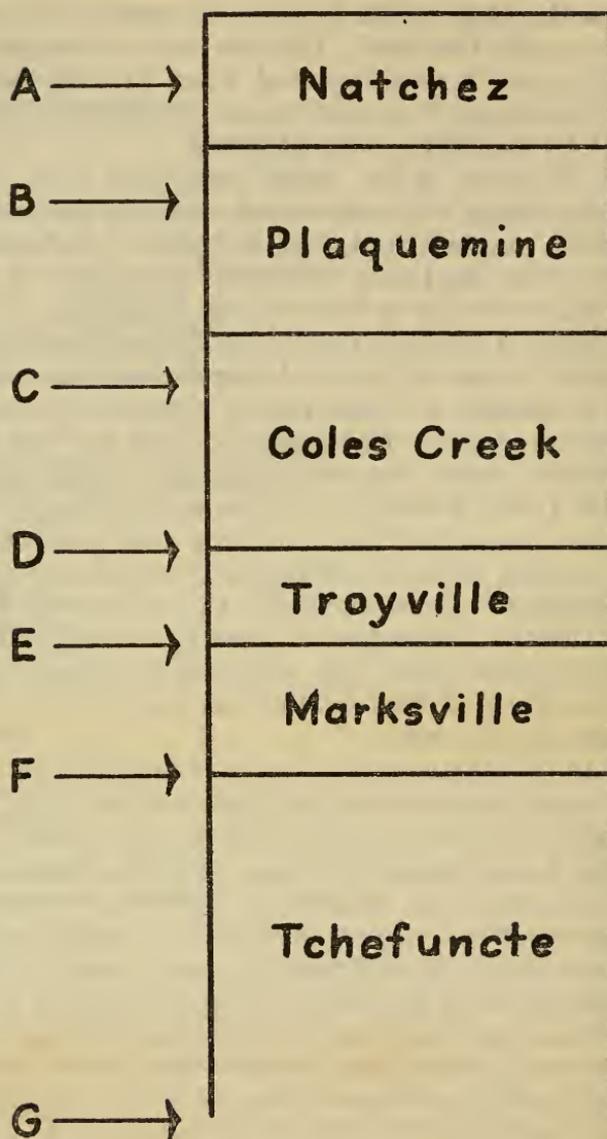


FIGURE 7.—Lower Mississippi chronology after Phillips, Ford, and Griffin, 1951. The letters denote arbitrary points in time that have been correlated with the archeological complexes, as indicated.

Plain, and the possibility of a direct linkage with Coles Creek Plain can be tentatively eliminated. Divorcement of Baytown-like from Coles Creek Plain is indirectly substantiated by the fact that the specimens of Coles Creek Incised from the Snipes Site are of the same approximate wall thickness and hardness as specimens of the same type in the Lower Mississippi Area. This would seem to obviate the possibility that the Baytown-like at Snipes is a local variation

of Coles Creek Plain, since the Coles Creek Incised specimens conform to the Lower Mississippi specifications.

If Coles Creek Plain may be tentatively eliminated, there are left only Troyville Plain and Marksville Plain as possible counterparts of Baytown-like. Typologically there is little evidence for making a choice between the two, so it will be necessary to consider other factors. Seriation studies in the Lower Mississippi Valley (Ford, 1951) indicate that there is only a very slight temporal overlap, near time E, of the types Marksville Plain and Coles Creek Incised. This suggests that Baytown-like, which occurred with Coles Creek Incised, is perhaps too late to be related to Marksville Plain. In addition, most of the burials at Snipes were extended and contained mortuary offerings of pottery vessels, while the Marksville Period burials, in the Lower Mississippi Area, are almost invariably flexed or semiflexed and devoid of accompaniments. Thus a post-Marksville placement of the Snipes component is indicated by most of the burials, although the presence of one flexed and one semiflexed burial without offerings suggests partial survival of Marksville burial customs, and therefore implies that the Snipes component is separated from the Marksville Period by only a comparatively short span of time.

Examination of Ford's seriation graphs based on material from the Greenhouse Site (Ford, 1951) reveals that the only position where a relatively large quantity of Troyville Plain should be associated with a relatively small quantity of Coles Creek Incised is in the period E-D. The quantitative relationship of Baytown-like (if a close relationship with Troyville Plain may be assumed) and Coles Creek Incised at Snipes should fit into the seriation pattern near the middle of the period E-D, or the Troyville Period of Ford.

In summary, the paste and stylistic characteristics of Baytown-like pottery link it most closely to the type Troyville Plain of the Lower Mississippi Area. The one outstanding difference is the presence of bone tempering in approximately one-third of the Baytown-like sherds. Ford's seriation graphs show that the quantitative relationship between Coles Creek Incised and Baytown-like (or Troyville Plain by assumed projection) existing at the Snipes Site is duplicated in the Lower Mississippi Valley only near the middle of the Period E-D. Survival of flexed and semiflexed burials similar to those of the pre-E Period also implies that placement of the Snipes component should not be a great deal later than time E. Therefore it appears probable that the Lower Mississippi occupation at Snipes should be aligned with the Period E-D of the Lower Mississippi chronology, probably near the middle of that period.

For purposes of convenience the above discussion was carried on in terms of temporal alinement of the Snipes component with Lower

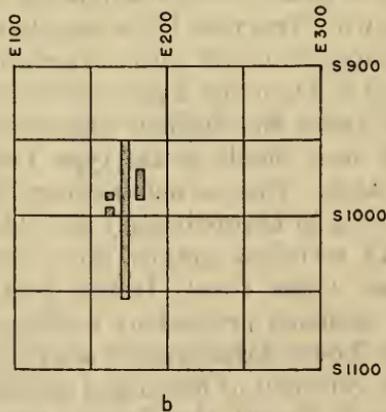
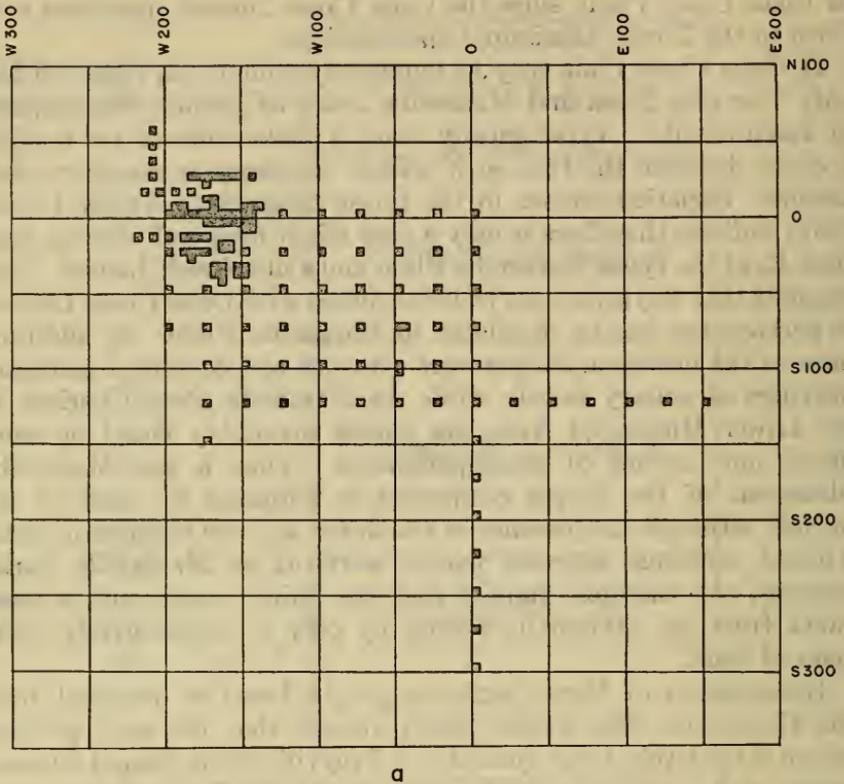


FIGURE 8.—Sketch map of Sherwin Site.

Mississippi periods. It should be pointed out and emphasized, however, that close relationship with Period E-D does not necessarily mean that the Snipes component is actually *contemporaneous* with that period in the Lower Mississippi context. The Snipes Site is in an extreme marginal situation: the phenomenon of marginal sur-

vival has been well documented and may have been operative in this particular case.

THE SHERWIN SITE (41-20D5-15)

Credit for discovery of the Sherwin Site is due Ernie Hill, one of the local workmen on the Texarkana excavation crew. The Sulphur River was in flood during most of the time the excavations were in progress, so when limited time and funds made it imperative to move on from Snipes to some other site, it was necessary to pick a site lying on high ground, many of the sites located by Stephenson being inundated at that time. Mr. Hill had collected artifacts from the Sherwin Site some years previously, and he recalled it as being on a relatively high ridge near the river. He guided the writer to the site, and after cursory inspection it was decided to move the field crew there and make test excavations. Work on the Sherwin Site was begun on June 9, 1952, and continued through June 25.

The Sherwin Site is located approximately a mile west of Knight's Bluff on a long, high ridge parallel to, and about one-half mile south of, the Sulphur River. Surface indications, consisting of artifacts, bone scraps, flint chips, and flecks of charcoal were scattered over an area of some 4 or 5 acres.

A grid with the same kind of numbering system employed at Knight's Bluff and Snipes was established; that is, 5-foot squares were used as excavation units, with square designations derived from distance in feet of the coordinates from an arbitrary datum point (see fig. 8). Two rows of test pits, crossing each other at right angles, were dug across the area showing the greatest surface concentration of cultural refuse. Spaced at 25-foot intervals, the test pits were along the north-south line *O* and the east-west line *S125*. Results of the tests indicated that the northwestern part of the tested area was likely to be most productive; consequently the entire area lying between lines *W0* and *W175* and between lines *N0* and *N125* was tested systematically by sinking 5-foot test pits at 25-foot intervals. Areas around the most productive test pits were excavated as indicated in figure 8, *a*. Designations for the 5-foot squares were derived from the coordinates at their southwestern corners, and each square was carried down by arbitrary 6-inch levels, the artifacts from each such level being sacked and labeled separately. Elevation of the southwestern corner of each square was taken as surface elevation in measuring the 6-inch levels.

After excavations were well under way, it was discovered that a promising midden, masked by dense vegetation along an old fence row, lay about 1,000 feet south and 175 feet east of datum (fig. 8, *b*). A 5-foot trench, 105 feet long, was dug across this midden in a

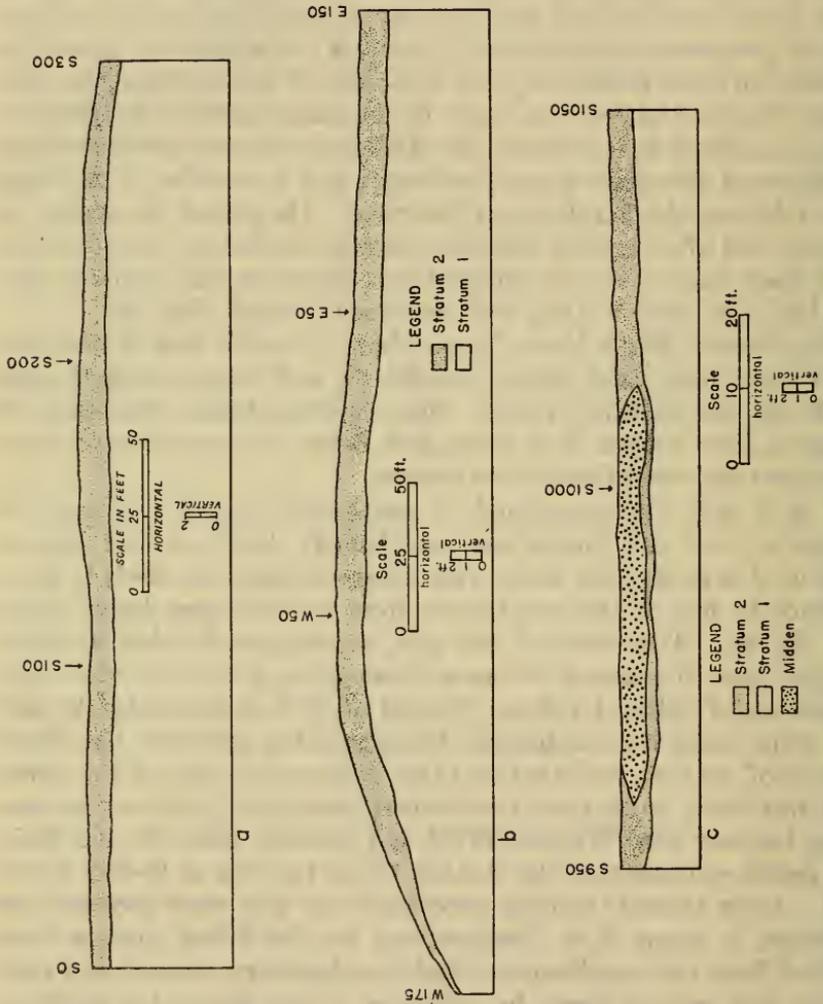


FIGURE 9.—Profiles, Sherwin Site. *a*, North-south profile at line 0; *b*, east-west profile at line S125; *c*, north-south profile through Feature 1 at line 170.

north-south direction, and five additional 5-foot squares were opened near the trench. The midden was especially productive.

Two geological strata (fig. 9) were present over the entire site: a dense, reddish clay (stratum 1) extending to unknown depth and underlying the light, sandy surface member (stratum 2). Stratum 2 ranged in thickness from 2 or 3 inches to approximately 2 feet.

FEATURES

No house patterns or other prominent features were encountered except for the midden (Feature 1) mentioned above. Although its exact shape was not determined, the midden appeared to be roughly circular. It was approximately 20 inches thick at the center, and was of fairly uniform thickness until lensing out abruptly at the edges (see fig. 9, *c*). The uniform thickness and abrupt lensing suggest that the accumulation of refuse may have taken place within an enclosure, but no post molds or other indications of a structure were found. Only a single 5-foot trench was excavated across the midden, however, and further investigation of the peripheral area might have uncovered post molds. Unfortunately, the site had to be abandoned before such explorations could be made.

It is of interest to note that Feature 1 rested on a thin (2 to 4 inches) layer of stratum 2 sand, and that the upper portion of stratum 2 also overlay the lensed edges of the midden (see fig. 9, *c*). Apparently, therefore, stratum 2 was only a few inches thick at the time the midden began accumulating—in contrast to its present normal thickness of approximately 20 inches. The thinness of stratum 2 at that particular point may have been due to a natural depression, or may have resulted from intentional excavation. The latter possibility favors the hypothesis that Feature 1 may represent accumulation of refuse on a house floor.

BURIALS

The eight burials were similar in many respects to those at Knight's Bluff, all being extended on the back, and seven of them being oriented with heads to the southeastern quadrant of the compass. There were two burials containing two individuals each; the others were single interments.

BURIAL No. 1:

Location: Squares N0-W145, N0-W150, S5-145, and S5-W150.

Grave dimensions: Maximum length, 77 inches; maximum width, 39 inches; depth, 31 inches.

Type of burial: Extended, on back.

Orientation: Head to northwest.

Dimensions of skeleton: Indeterminate, owing to lack of preservation.

Completeness: Vestiges of most major bones present.

Preservation: Poor.

BURIAL No. 1—Continued

Associations: Small, engraved bottle (possibly Maddox Engraved, pl. 4, *h*); medium-sized jar (Pease Brushed-Incised, pl. 4, *g*) near right shoulder.
Physical observations and measurements: Adult, perhaps 50 to 60 years of age. Other observations and measurements indeterminate, due to poor preservation.

BURIAL No. 2:

Location: Squares S20-W160, S20-W165, S25-W160, and S25-W165.
Grave dimensions: Maximum length, 85 inches; maximum width, 60 inches; depth, 48 inches.
Type of burial: Contained two individuals, both extended on the back.
Orientation: Heads to southeast.
Dimensions of skeletons: Indeterminate owing to lack of preservation.
Completeness: Vestiges of most major bones present.
Preservation: Poor.
Associations: A badly crushed medium-sized jar (Pease Brushed-Incised) slightly above skulls; a small engraved bottle (Maddox Band Engraved (?), pl. 5, *a*) at side of right skeleton.
Physical observations and measurements: Adult. Other observations and measurements indeterminate owing to poor preservation.

BURIAL No. 3:

Location: Squares S100-W50 and S105-W50.
Grave dimensions: Maximum length, 60 inches; maximum width, 45 inches; depth, 42 inches.
Type of burial: Extended, on back, arms at sides.
Orientation: Head to south.
Dimensions of skeleton: Maximum length, 40 inches; maximum width, 12 inches; thickness, 8 inches.
Completeness: Traces of all major bones present.
Preservation: Poor.
Associations: A small jar (Nash Neck Banded, pl. 5, *b*) and a small, shallow saucer of unknown type (pl. 5, *c*) both at left knee. A teardrop-shaped, conch shell pendant (pl. 14, *l*), possibly an owl effigy, at neck.

Physical observations and measurements: A child, perhaps 6 or 7 years of age. Preservation too poor for measurements or other observations.
Remarks: The only burial at Sherwin with offerings other than ceramics.

BURIAL No. 4:

Location: Squares S35-W170, S35-W175, S40-W170, and S40-W175.
Grave dimensions: Maximum length, 66 inches; maximum width, 40 inches; depth, 39 inches.
Type of burial: Indeterminate, but assumed to be extended because of grave length.
Orientation: Head to southeast.
Dimensions of skeleton: Indeterminate owing to lack of preservation.
Completeness: Only a few bone scraps remaining.
Preservation: Very poor.
Associations: Three small vessels of unknown types—one plain, one punctated, and one punctated and appliqued (pl. 5, *d*, *e*, and *f*); one small engraved bottle of unidentified type.
Physical observations and measurements: Adult. Preservation too poor for measurements or other observations.

BURIAL No. 5:

Location: Squares S35-W150, S35-W155, S40-W150, and S40-W155.

Grave dimensions: Maximum length, 62 inches; maximum width, 38 inches; depth, 32 inches.

Type of burial: Extended, on back, arms at sides.

Orientation: Head to southeast.

Dimensions of skeleton: Maximum length, 60 inches; maximum width, 20 inches; thickness, 9 inches.

Completeness: Fragments of most major bones present.

Preservation: Skull in good condition, other bones fragmentary.

Associations: None.

Physical observations and measurements:

Sex: Female.

Age: 25 to 30 years.

Cranial measurements: Maximum length, 165 mm.; maximum width, 138 mm.; index 83.6 (brachycranic); minimum frontal diameter, 92 mm.; basion-bregma height, 141 mm.; nasal index, 50 (mesorhinc); bizygial diameter, 95 mm.

General observations: Occipital is slightly flattened, otherwise there is no indication of deformation; a number of Wormian bones near lambdoidal suture.

Remarks: A neat, round hole in the top of the skull was probably made by a probing rod. Pot hunters in the area frequently use long, slender, pointed iron rods for locating burials by probing up to 7 or 8 feet deep in the sand. The operator can detect the presence of pottery vessels or skulls by the "snap" of the rod when a vessel or skull is punctured. Graves dug well into the dense clay strata usually underlying the surface sand of sites in east Texas can also be detected with probing rods because of the comparative softness of the grave fill. Upon locating and exposing a burial, some pot hunters remove the pottery vessels and other accompaniments, leaving the skeletons undisturbed. There is a possibility that burial No. 5 may have originally contained pottery vessels or other offerings that were removed by the pot hunter responsible for puncturing the skull.

BURIAL No. 6:

Location: N10-W170, N10-W175, and N5-W170.

Grave dimensions: Maximum length, 66 inches; maximum width, 42 inches; depth, 48 inches.

Orientation: Head to southeast.

Dimensions of skeleton: Maximum length, 60 inches; maximum width and thickness indeterminate.

Completeness: Skull and traces of long bones present.

Preservation: Very poor.

Associations: One small jar (Nash Neck Banded, pl. 5, *h*) near left shoulder; one small jar (Nash Neck Banded, pl. 5, *g*) near left knee; one small bottle (Haley Engraved, pl. 5, *i*) near right knee.

Physical observations and measurements: Adult. Preservation too poor for measurements and other observations.

BURIAL No. 7:

Location: N0-W190 and N5-W190.

Grave dimensions: Maximum length, 85 inches; maximum width, 53 inches; depth, 68 inches.

Type of burial: Extended, on back, arms at sides.

Orientation: Head to southeast.

BURIAL No. 7—Continued

Dimensions of skeleton: Maximum length, 73 inches; maximum width, 22 inches; thickness, 6 inches.

Completeness: Portions of most major bones present.

Preservation: Fair.

Associations: One medium-sized bottle (possibly a variant of Haley Engraved, pl. 6, *b*) at left side of skull; one plain, medium-sized jar of unidentified type (pl. 6, *a*) between knees.

Physical observations and measurements:

Sex: Male.

Age: 40 to 50 years.

Cranial measurements: Maximum length, 180 mm.; maximum width, 147 mm.; index, 81.6 (low brachycranial); minimum frontal diameter, 97 mm.; other measurements indeterminate.

General observations: Fronto-occipital deformation; prominent supra-orbital ridges; deep depression at inion.

BURIAL No. 8:

Location: Square S150-W175.

Grave dimensions: Maximum length, 66 inches; maximum width, 20 inches; depth, 36 inches.

Type of burial: Contained two individuals, both extended on back.

Orientation: Heads to southeast.

Dimensions of skeletons: Not recorded.

Completeness: Fragments of most major bones present.

Preservation: Poor.

Associations: A small carinated bowl (pl. 6, *e*) of unidentified type near right shoulder of right skeleton; a small bottle (Higgins Engraved, pl. 6, *d*) between skulls; a small bottle (Higgins Engraved, pl. 6, *c*) between skeletons at knees.

Physical observations and measurements:

Skeleton 1 (on right side of grave):

Sex: Indeterminate.

Age: Adolescent.

Cranial measurements: Indeterminate because of poor preservation.

General observations: Possible fronto-occipital deformation.

Skeleton 2:

Sex: Indeterminate.

Age: Senile.

Cranial measurements: Indeterminate because of poor preservation.

General observations: Marked post-coronal depression, probably indicative of intentional deformation.

THE ARTIFACTS

In analyzing the 1,729 specimens recovered from the Sherwin Site, the midden (Feature 1) seemed to offer the only possibility for close intrasite association of artifact types. Except for the midden, only the sandy surface member, stratum 2, contained artifacts, and, since it was only 2 to 24 inches in thickness and had been greatly disturbed by rodents and plowing, there was little chance there of detecting any vertical stratification of artifact types. Examination of artifacts, by 6-inch levels, from the thickest portions of stratum 2 failed

to show any significant differences in vertical distribution of types; neither was there any apparent localization of any of the principal types in areas outside Feature 1.

Feature 1, on the other hand, being a compact midden with no sign of having been disturbed, is considered an excellent unit for observing close association of artifact types. Since examination of artifacts from the midden, by levels, revealed no vertical stratification, the midden artifacts, as a group, can be considered as having been discarded or lost by one group of people (perhaps on the floor of a house) over a period probably not exceeding a few decades.

Table 3 not only lists all the artifacts from Sherwin, but is also designed to point out associations within Feature 1 and their relationships to the rest of the site; it includes a column for specimens found in Feature 1, a column for those found in the rest of the site, and a totals column.

CERAMICS

All the pottery types found at Sherwin were also present at Knight's Bluff except for a few sherds that may be intrusive. Some minor types found at Knight's Bluff, however, do not appear at Sherwin. They are: Cass Appliqued, Antioch Engraved, Crockett Curvilinear Incised, Belcher Engraved, Rattle Bowls, Coles Creek-like, and possibly Pennington Punctated-Incised.

Two bottles of a rather distinctive design (pl. 6, *c* and *d*) were found in burial No. 8 at Sherwin. Three sherds of similar bottles were found in Feature 1, and one sherd was recovered at Knight's Bluff. Since almost identical specimens from other sites have been noted, it is thought worthwhile to describe this bottle form briefly and to assign it a tentative type name, Higgins Engraved. Higgins seems to occur mostly, or entirely, as bottles with flat, round bases, ovoid bodies, and cylindrical necks. Paste is clay-grit tempered, brown to gray in surface color, and cores are usually dark. Fire clouding is common. The surface is smoothed, but the polish so characteristic of many Caddoan bottles is lacking. Decoration consists of two or three horizontal engraved lines encircling the vessel just below the neck, with a series of small, closely spaced triangles pendent from the bottom line. The triangles are placed with apexes pointing downward, and their interiors are either excised or roughened with closely spaced scratches. The simple design is reminiscent of the type Hickory Engraved of the Alto, Spiro, and Haley Foci (Newell and Krieger, 1949, pp. 90-91), but shape and general execution are different from Hickory.*

*AUTHOR'S NOTE. Webb (1959, figs. 75, 77, 115, 116, and 122) illustrates several bottles from the Belcher Site that are similar in size, shape, and paste to Higgins. Some are plain, and some have a series of horizontal engraved lines (but no pendent triangles) just below the neck. The plain specimens are identified as Smithport Plain, the engraved ones as Hickory Engraved.

TABLE 3.—*Tabulation of all artifacts from the Sherwin Site, showing the number of each type found in Feature 1*

CERAMICS:

Complete and restorable vessels:

	<i>In Feature 1</i>	<i>Outside Feature 1</i>	<i>Total</i>
Pease Brushed-Incised (one each with burials Nos. 1 and 2).....	---	2	2
Nash Neck Banded (one with burial No. 3, two with burial No. 6).....	---	3	3
Haley Engraved (one with burial No. 6, and a possible variant with burial No. 7).....	---	2	2
Higgins Engraved (both with burial No. 8).....	---	2	2
Maddox Band Engraved (two bottles, possibly of this type, one each with burials Nos. 1 and 2).....	---	2	2

Miscellaneous:

Two small jars with punctates and brushing (plus appliqueing on one), clay-grit tempered, type unknown (both with burial No. 4).....

One small, plain shouldered bowl with outflaring rim, clay-grit tempered, type unknown (burial No. 4).....

One wide-mouthed jar of medium size, plain except for four short, equally spaced vertical applique strips on the upper part of the body, clay-grit tempered, type unknown (burial No. 7).....

One small, engraved bottle with circles and interlocking scrolls of hachured bands, red pigment in lines, shell tempered, type unknown (burial No. 4).....

One small, shallow, plain saucer, with two opposing tabs on the rim, clay tempered, type unknown (burial No. 3).....

One small carinated bowl, with design of incised triangles and horizontal lines, clay-grit tempered, unknown type (burial No. 8).....

Potsherds:

Pease Brush-Incised.....	17	36	53
Nash Neck Banded.....	---	42	42
Dunkin Incised, late variant.....	3	8	11
McKinney Plain.....	---	4	4
Baytown-like.....	20	24	44
Foster Trailed-Incised.....	---	5	5
Haley Engraved.....	1	---	1
Higgins Engraved.....	3	---	3
Pennington Punctated-Incised (?).....	---	2	2
Barkman Engraved.....	15	51	66
Barkman design, incised bowls.....	---	1	1
Belcher Ridged.....	---	2	2
Avery Engraved.....	---	1	1
Simms Engraved.....	1	15	16
Marksville Incised.....	1	---	1

TABLE 3.—*Tabulation of all artifacts from the Sherwin Site, showing the number of each type found in Feature 1—Continued*

CERAMICS—Continued	In Feature 1	Outside Feature 1	Total
<i>Potsherds—Continued</i>			
Plain, clay tempered, not further classified.....	190	744	934
Plain, bone tempered, not further classified....	----	27	27
Plain, shell tempered, not further classified....	1	1	2
Brushed, not further classified.....	24	99	123
Incised, not further classified.....	37	111	148
Appliqued, not further classified.....	3	43	46
Punctated, not further classified.....	1	2	3
Engraved, not further classified.....	27	92	119
Plain, fiber tempered.....	----	1	1
Clay pipes, long-stemmed thin-walled.....	1	2	3
Clay pipes, short-stemmed, elbow.....	----	1	1
CHIPPED-STONE ARTIFACTS:			
<i>Dart points:</i>			
Gary.....	----	8	8
Ellis.....	----	2	2
Indeterminate.....	1	7	8
<i>Arrow points:</i>			
Perdiz.....	----	1	1
Alba.....	----	1	1
Indeterminate.....	1	1	2
Small, crude blades.....	----	4	4
Small gouges.....	----	1	1
Heavy side scrapers.....	----	1	1
Flake scrapers.....	----	6	6
Small "picks".....	----	1	1
Indeterminate worked flint.....	----	5	5
GROUND-STONE ARTIFACTS:			
Grinding slabs.....	----	2	2
Manos, unshaped.....	----	1	1
Hones.....	----	1	1
MISCELLANEOUS STONE SPECIMENS:			
Quartz crystals.....	----	5	5
Pitted stones.....	----	2	2
SHELL ARTIFACTS:			
Conch shell pendants.....	----	1	1
TOTAL.....	347	1,382	1,729

There are several sherds that do not fit any of the recognized Caddoan types. They can probably be best explained, by and large, as the result of individual experimentation or expression of personal idiosyncrasies of the potters who made them. Only one of the unusual sherds seems to be definitely extraneous—a small sherd (pl. 10, *g*) with three shallow, U-shaped, parallel, incised lines forming a zone that is flanked on both sides by areas bearing fine dentate stamping. In paste characteristics as well as decoration it appears identical to the type Marksville Stamped (Phillips, Ford, and Griffin, 1951, pp. 91-94) of the Lower Mississippi Valley.

The only ceramic artifacts other than pottery vessels are four pipe fragments. Three are of the long-stemmed, thin-walled form; the other fragment is part of an elbow pipe in the Fulton Aspect tradition.

The principal resident types at the Sherwin Site seem to be, for the most part, the same as at Knight's Bluff. They are Barkman Engraved, Pease Brushed-Incised, Nash Neck Banded, and Baytown-like. However, one of the common types at Knight's Bluff, McKinney Plain, is only poorly represented (4 sherds) at Sherwin. Otherwise there are no significant differences between relative quantities of the principal types at Knight's Bluff and Sherwin (see table 4), with the possible exception of Simms Engraved, which is more common at Sherwin. Total number of sherds is so small, however, that the difference may be of no great consequence.

The one striking incongruity is the total absence of Nash Neck Banded in Feature 1 at Sherwin (see table 3). Since the other resident types are well represented in Feature 1, this omission is disturbing and may indicate some restriction of Nash's distribution within the compass of Texarkana Focus. The restriction may reflect either temporal or cultural factors.

NONCERAMIC

Nonceramic artifacts were comparatively rare at the Sherwin Site. Since most nonceramic forms are comparable to the Knight's Bluff and Snipes specimens already described in this report, the descriptions will not be repeated here. A few specimens with no counterparts at the other two sites, however, are described briefly below.

An arrow point of widespread distribution in Texas is the Perdiz type (pl. 11, *bb*), an affiliate of the Central Texas Aspect, the Bravo Valley Aspect, the Rockport Focus, the Wylie Focus, the Henrietta Focus, the Galveston Bay Focus, and the Frankston Focus. It is a thin point with prominent shoulders and frequently has sharp barbs. Blade edges are sometimes serrated. The most striking feature is the stem, which terminates in a sharp point at the base.

One heavy side scraper (pl. 12, *m*) was found. It is of gray quartzite, weighing about $13\frac{1}{4}$ pounds, and has been chipped along one long side to form a scraping edge. One face is unchipped, flat, and smooth, and the other face is steeply convex. The scraping edge is not sharp, and may have been subjected to some battering. This implement is similar to specimens of the Edwards Plateau Aspect in central Texas.

At the neck of burial No. 3 was a conch shell pendant (pl. 14, *l*). In outline shape it closely resembles an owl, with the two suspension holes in proper position for the eyes. A few incised lines would be

TABLE 4.—Quantitative comparison of pottery types at the Knight's Bluff and Sherwin Sites (number of specimens and percentage, of all identified specimens, are given for each type)

TYPE:	Knight's Bluff		Sherwin	
	Number	Percent	Number	Percent
Barkman Engraved.....	329	0. 212	66	0. 253
Hatchel Engraved, bottles.....	2	. 001	1	. 004
Barkman design, incised, bowls.....	3	. 002	1	. 004
Bowie Engraved.....	1	. 001	-----	-----
Simms Engraved.....	7	. 004	16	. 061
Baytown-like.....	284	. 183	44	. 168
Avery Engraved.....	3	. 002	1	. 004
Belcher Engraved.....	2	. 001	-----	-----
Pease Brushed-Incised.....	392	. 253	55	. 211
Nash Neck Banded.....	142	. 092	45	. 173
Dunkin Incised, late variant.....	86	. 055	11	. 042
McKinney Plain.....	219	. 141	4	. 015
Belcher Ridged.....	10	. 006	2	. 008
Pennington Punctated-Incised.....	13	. 008	2	. 008
Cass Applied.....	24	. 015	-----	-----
Foster Trailed-Incised.....	6	. 004	5	. 019
Crockett Curvilinear Incised.....	6	. 004	-----	-----
Haley Engraved.....	15	. 010	3	. 004
Antioch Engraved.....	4	. 003	-----	-----
Higgins Engraved.....	1	. 001	5	. 019
Rattle Bowls.....	3	. 002	-----	-----
Total.....	1, 552	1. 000	261	1. 000

a great help toward completing the owl effect, but any lines that may have been there cannot be detected now because of the greatly disintegrated condition of the specimen. The total length is 9.4 cm., maximum width is 3.8 cm., and thickness is approximately 4 mm.

DISCUSSION AND CONCLUSIONS

The Sherwin Site evidently represents a small village occupied by a sedentary people who may be safely assumed to have been agricultural, although no actual remains of agricultural products were found. The general character of the site—its size, location, and artifact types—parallels closely the Knight's Bluff Site, only a mile away. In contrast to Knight's Bluff, however, no evidence of an earlier Archaic occupation was found at Sherwin.

The principal resident pottery types are Barkman Engraved, Pease Brushed-Incised, Baytown-like, and Nash Neck Banded. Of less frequent occurrence, but perhaps of minor resident status, are types Higgins Engraved, Simms Engraved, Dunkin Incised, late variant, McKinney Plain, Foster Trailed-Incised, and possibly Avery Engraved, Belcher Ridged, and Haley Engraved.

All of the major resident types are quantitatively comparable to the same types at Knight's Bluff. But one of the major types at

Knight's Bluff, McKinney Plain, is a very minor type at Sherwin, being represented by only four sherds. Except for the paucity of McKinney Plain, the Sherwin ceramics are remarkably similar, typologically and quantitatively, to those of Knight's Bluff; consequently, assignment of the Sherwin Site to the Texarkana Focus is indicated. Again, this necessitates modification of the Texarkana ceramic complex to fit the Sherwin situation, that is, McKinney Plain must be dropped as a major resident type.

The nonceramic artifacts are similar in general to those of Knight's Bluff, although the samples are smaller. Bogie Price, who has been collecting artifacts in the Texarkana area for many years and who is an unusually keen observer, has noticed that full-grooved hematite axes occur principally at those sites with considerable evidence of preceramic Archaic occupation. The absence of axes at Sherwin, where there was no preceramic material, tends to substantiate Price's observation, and suggests that the full-grooved axes at the Knight's Bluff Site may have derived from the Archaic occupation there. The evidence, however, is not sufficient for conclusive affirmation of Price's hypothesis.

In summary, the Sherwin Site bears a close resemblance to the Knight's Bluff Site in most respects and can be said to be primarily a component of the Texarkana Focus, with certain aberrations from what is generally considered the norm for that focus. Like the Knight's Bluff Village, the Sherwin Site has a major resident pottery type, Baytown-like, not previously recognized as a trait of the Texarkana Focus. In addition, three pottery types usually thought of as staunch Texarkana affiliates are notably scarce; they are Avery Engraved, Foster Trailed-Incised, and McKinney Plain.

On the basis of the evidence it is difficult to determine the exact chronological position of the Sherwin Site in relation to the Knight's Bluff Village. However, there are indications that Sherwin may be of slightly later date. These indications are partly negative in character and consist of the following factors: (1) Pottery types of Gibson Aspect provenience (Pennington Punctated-Incised, Crockett Curvilinear Incised, and Haley Engraved) were found at Knight's Bluff but were absent or extremely rare at Sherwin; (2) Simms Engraved is more common at Sherwin than at Knight's Bluff, perhaps reflecting a florescence of that type toward the end of the Texarkana Focus as hypothesized on data from other sites; (3) the scarcity of McKinney Plain at Sherwin (and the absence of Nash Neck Banded in Feature 1) may be an indication that abandonment of prominent Texarkana Focus types—presaging a ceramic developmental trend toward the Glendora complex—may have begun. Although patently tenuous, the argument for alinement of the Sherwin Site with the latter stages of the Texarkana Focus can be tentatively

assumed in the absence of conflicting data. In view of the many parallels between Sherwin and Knight's Bluff, however, any time difference that may exist between the two must be slight, undoubtedly to be reckoned in decades.

GENERAL DISCUSSION AND CONCLUSIONS

The Knight's Bluff Village is considered to be a manifestation of what has been termed the Texarkana Focus (Krieger, 1946, pp. 206-212) with certain aberrations from the norm of that complex. The Sherwin Site is very similar in most respects to the Knight's Bluff Village, but has a few peculiarities of its own. The Snipes Site is different from both of the others, being basically affiliated with the Baytown Period of the Lower Mississippi Valley, probably with the Period E-D, or the Troyville Period, specifically. Caddoan ceramics also occurred at the Snipes Site, but exact relationship to the principal occupation could not be determined.

In outlining the outstanding problems in Caddoan Area archeology in the Introduction, it will be recalled that the problems were considered in two categories: (1) Those concerned with interrelationships of traits and complexes within the Caddoan Area itself, and (2) those regarding relationships between Caddoan Area complexes and those of other areas, especially the Lower Mississippi Valley. These two groups of problems will be discussed separately.

Intra-area problems.—To one not familiar at first hand with Caddoan Area archeology, the present literature might lead to an impression that the recognized complexes are made up of artifact types and other culture traits that occur almost invariably in closely knit, tightly integrated clusters or foci. This may have resulted in the concept that a focus consists of a consistent, distinctive trait inventory. Thus when artifact types identified with one particular focus are found with a component of another focus, the tendency is to think in terms of "influence" or "trade items." While influence or trade may be responsible in some cases, the writer feels that presence of many of these "extraneous" traits can be explained in terms of what might be thought of as "normal distribution patterns of types."

One factor that has probably contributed to the concept of restrictive, cohesive clustering of types is that *many of the Caddoan foci are predicated basically on data from one excavated site to the focus*. This is especially true of the Gibson Aspect where the Alto Focus is based on the Davis Site, the Gahagan Focus on the Gahagan Site, the Spiro Focus on the Spiro Site, and the Sanders Focus on the Sanders Site. No other major components of any of these Gibson Aspect foci have been excavated and described. Artifact types identi-

fied with the several foci, however, have been found on the surface of other sites where they tend to substantiate, in a general sort of way, the associations observed at the excavated sites. Some of the Fulton Aspect foci are founded on two or more excavated sites although the excavations in several cases were very limited, actually being more on the order of "test" excavations than anything else. But the Texarkana Focus is predicated primarily on the Hatchel Mound, the Frankston Focus on the Saunders Site, and the Belcher Focus on the Belcher Site.

Examination of the history of Caddoan Area archeology reveals that the present classification of foci came about in this manner: The few individuals or institutions who were particularly interested in Caddoan area sites, and who were fortunate enough to be financially geared for extensive excavations, naturally began their investigations with the largest, most promising sites that were readily accessible. Few comparative data were available to these pioneers, so there was little possibility of accurate analysis and interpretation. The basic areal synthesis was accomplished by Krieger subsequent to the W.P.A.-"millionaire archeologist" era, but the focal definitions have been necessarily founded, for the most part, on those previous excavations. Regional specialists such as Clarence Webb have contributed data acquired at a relatively late time, but limited resources have tended to restrict their investigations to surface collections and small-scale excavations. Data made available by the regional specialists were utilized fully in Krieger's areal synthesis, and, while they fit the focus classifications in general, the focal definitions are nevertheless based fundamentally on the larger excavated sites—with one site to a focus in many cases.

The most sensitive and diagnostic markers for identifying a focus are pottery types. In compiling the trait lists for the various foci it was observed that frequently one particular type occurred in quantity in not only one, but in two or even more focal contexts. These types were thought of as being shared by the foci concerned. Sometimes, however, a small quantity of a type identified with Focus A may be found in a component of Focus B. The tendency in these cases has been to think of the type as trade material or an expression of influence on Focus B by Focus A.

At this point I should like to back off from the McKern system and its application in the Caddoan Area and consider factors regarding the distribution of types in space and time. Axiomatic to the discussion to follow is the concept that—barring some abrupt physiographic or cultural barrier—the geographical distribution of an archeological type tends to assume a lens-shaped pattern. That is, there is normally a relatively heavy concentration in the central portion of a distribution pattern and a thinning toward the periphery. Sometimes barriers, such as an ocean, precipitous mountain

ranges, or antagonistic human neighbors, may result in a distribution pattern with an abrupt termination in a zone of heavy concentration. Unless the barrier completely encompasses the distribution, however, there would normally be a lensing out of the type at the margins not restricted by the barrier.

A similar sort of distribution occurs within a particular site; that is, the greatest quantitative representation of a type will usually be found in areas of heaviest occupation within the site, with a peripheral scattering on all sides. Again, a barrier such as the confining walls of a house within a site can result in a distribution pattern of uniform thickness with abrupt margins instead of the characteristic peripheral thinning.

Thus a cross section through the areal distribution of a type would normally reveal a central zone of relatively heavy concentration with a lensing out toward the periphery. Actually there will usually be localized "hills and valleys" in such a cross section reflecting variations in regional population, local selectivity, temporal factors, etc. But these do not alter the basic lens shape of the pattern, although they compound it.

If we may accept the axiom that a normal distribution pattern is lens-shaped, it follows that one factor governing the quantity of a particular type found at a particular archeological site is the geographical position of the site. That is, a site near the center of distribution of a type would be likely to contain more specimens of that type than a site located in the marginal part of the type's distribution. In brief, the geographical location of an archeological site, with respect to the distribution patterns of the types occurring therein, is one of the determinants of type frequencies in the site.

The dimension of time also imparts a lens shape to a distribution pattern, but in a vertical direction at right angle to the geographical pattern of distribution. The inherent shape of the vertical, or temporal, distribution pattern is amply demonstrated by Ford's seriation graphs (Ford, 1951 and 1952). The quantity of a particular type in a particular site, therefore, depends on the temporal, as well as the geographical, position of the site.

The cultural phenomenon of selectivity also helps shape distribution patterns. Selectivity can only be operative, however, among peoples who have an opportunity to accept or reject a certain trait; in other words, they must be located within the geographical and temporal limits of a type's distribution if they are to have an opportunity to exercise an option. Therefore, when an archeological site is excavated, the artifact inventory will necessarily be dependent not only on the cultural factor of selectivity, but also on the extra-cultural factor of geographical and temporal position of the site. If the distribution patterns of two or more types should coincide

both geographically and temporally, they would make up a closely knit, integrated complex. All of which leads up to the main point: Only rarely, if ever, do such coincident patterns occur in the Caddoan Area. It appears, rather, that each type (especially ceramic and arrow point types) has its own peculiar distribution in time and space, which seldom, if ever, coincides with the distribution of another type.

A good example to illustrate the factors discussed above is the situation at the Battle Site. This site was excavated in 1948 by Lynn Howard, under the supervision of Alex Krieger, on a Viking Fund grant. Excellent associations of Texarkana and Belcher Focus ceramic types were found in house floors, the types of both complexes being present in some quantity (Krieger, oral communication). This is not at all surprising in view of the more or less intermediate position of the Battle Site (in LaFayette County, Ark.) with reference to the Hatchel and Belcher Sites. In the present framework of Caddoan Area archeology, the Battle Site would be measured against the Texarkana and Belcher complexes as they have been previously defined. But the thought occurs that had the Battle Site been excavated prior to the Hatchel and Belcher Sites, we would very likely have had a "Battle Focus" comprising a mixture of traits now relegated to the Texarkana and Belcher Foci. This illustrates the point that some focal definitions in the Caddoan Area are dependent upon the fortuitous circumstance of which sites, in which geographical and temporal positions, were excavated first. This does not mean that the foci, as now envisioned, are not useful for comparative, analytical, and interpretative purposes, but does indicate that a focus should not be regarded as an integrated complex of traits that occurs with little variation from site to site. The McKern system is useful for ordering of data, but it must be kept in mind by any person employing that system of classification that a focus is an arbitrary classificatory unit that frequently is not comparable to cultural groupings such as tribes.

Distribution patterns of artifact types, design motifs, and other culture traits in the Caddoan Area (and, I suspect, in other areas) fit together in an extremely complex manner, with much overlapping of related elements in both the spatial and temporal dimensions. The writer believes that the distribution patterns of the various elements must be defined and fitted together into an area-wide structure before an accurate, detailed reconstruction of the archeology of the Caddoan Area can be attained. Many of the foci, as they are now defined, are based on one excavated site; therefore their definitive trait lists are derived largely from only one small segment that happened to include various traits. Detailed knowledge of the inter-

relationships between traits cannot be achieved until their total distributions are known.

Lest the foregoing be construed as a criticism of the methodology employed by the Caddoan Area specialists who formulated the present classification of aspects and foci, I should like to point out that all of them are well aware of the diverse distribution patterns of the traits and are, I think, in essential agreement with the ideas expressed above. I simply wish to set down explicitly here what has been implied but not emphasized in previous publications. Before distribution patterns can be accurately determined, a great deal of fieldwork must be done. Any inaccuracies that may exist in present concepts of Caddoan Area archeology are due to the fact that the data are meager—not to inadequate or erroneous interpretation of those meager data.

To reiterate, the present classification of Caddoan Area archeology, based on the McKern system of classification, is suitable and adequate for general ordering of data. But the foci or complexes, in most or all cases, do not consist of closely knit clusters of types and other traits: individual distribution patterns actually extend beyond the focal boundaries in many directions, both spatially and temporally, cutting across the various foci in the process. When working with the McKern system this should be kept in mind.

The Knight's Bluff and Sherwin Sites offer little data that can add to present interpretations of Caddoan Area archeology. The diversity of typological distribution patterns is borne out by the differences in quantitative representation of types at Knight's Bluff, Sherwin, and the Hatchel Site (type site of the Texarkana Focus). Quantitative and qualitative data related to those types have been herein recorded for what they are worth to future studies. The Snipes Site offers no significant data regarding intra-area problems. It will be considered, along with certain data from Knight's Bluff and Sherwin, in the following section on inter-area relationships.

Inter-area relationships.—Evidence of relationships between the Caddoan Area and other regions consists largely of pottery types identified with the Baytown Period of the Lower Mississippi Valley. No direct indication of contacts in other directions was found. The Snipes Site contained both Caddoan and Lower Mississippi ceramics, and promised at first to provide a link between complexes of the two areas. However, the site had been so badly disturbed that the exact relationship between the two ceramic traditions could not be determined. Principal occupation at the Snipes Site was apparently by Lower Mississippi affiliates closely related to the period E-D (or Troyville). Caddoan ceramics found at Snipes include both Fulton Aspect and, to a lesser extent, Gibson Aspect types, which could represent: (1) Separate occupation by Caddoan peoples, either be-

fore or after the Lower Mississippi occupation; (2) material acquired by the Lower Mississippi people from neighboring Caddoan peoples; (3) accretions actually manufactured by the Lower Mississippi people, in which event inspiration would certainly have been derived from neighboring Caddoans.

The latter of the three possibilities can be eliminated with little danger of error. The differences between Caddoan and Lower Mississippi pottery are sharp, and it is hardly credible that adoption of Caddoan techniques of pottery manufacture by aliens would have resulted in perfect duplication of the Caddoan styles. And the Caddoan sherds at Snipes are duplicates of styles in Caddoan components elsewhere. There is little evidence for deciding which of the first two possibilities is more likely. The four burials with mortuary offerings contained only Lower Mississippi pottery, which suggests that there may have been separate occupations. Certainly, however, such negative data cannot be considered as conclusive evidence. Most of the Caddoan sherds seem to be of Fulton Aspect styles, which should be too late, by all estimates, for direct association with period E-D. But being in a marginal position with respect to the distribution of the Troyville complex, there could well be a considerable time lag between the Snipes component and Troyville manifestations to the east; consequently, contemporaneity of Troyville survivals and the Fulton Aspect in the Texarkana region cannot be definitely ruled out. Contemporaneity of Gibson Aspect and Troyville is compatible with Krieger's concepts but would be out of phase with Ford's.

If the Caddoan material at Snipes was actually acquired from neighboring Caddoan peoples, it would seem probable that there should be indications of reciprocal trade of Lower Mississippi ceramics to the Caddoan peoples. There is some evidence of such trade at Knight's Bluff and, to a lesser extent, at Sherwin in the form of sherds which cannot be distinguished from the predominant plain ware at Snipes, termed Baytown-like. There is a notable absence of Coles Creek Incised sherds at Sherwin and Knight's Bluff, but Coles Creek Incised was scarce at Snipes—only 21 of the 1,135 sherds being of that type. Therefore it is conceivable that the absence of Coles Creek Incised at the two Caddoan sites could be a purely fortuitous circumstance and does not necessarily negate the possibility that the Baytown-like sherds were actually derived directly or indirectly from Lower Mississippi peoples. There is one sherd from Knight's Bluff that has been tentatively identified as Marks-ville Stamped. If that identification be correct, this might be another indication of contacts between Lower Mississippi and Caddoan peoples. Two sherds of Coles Creek Incised were found during excavation of the Hatchel Site, type site of the Texarkana Focus,

and another was recovered from the A. P. Williams Site, a Fulton Aspect component in Titus County, Tex., attributed to the Titus Focus. All three sherds are illustrated in plate 10. These associations, especially when combined with the suggestion of similar associations at the Snipes, Knight's Bluff, and Sherwin Sites, lead inescapably to the conclusion that the Fulton Aspect must have been contemporaneous, in part, with marginal manifestations of the Baytown Period. However, temporal alinement of the Fulton Aspect—even the earliest part thereof—with the Baytown Period in the Lower Mississippi context would not fit present chronological constructs. And, even allowing a reasonable time lag for marginal Baytown Period sites such as Snipes, it would be difficult to fit a Fulton Aspect-Baytown Period alinement into Ford's chronology, although it might be squeezed into Krieger's.

In summary, the three Texarkana Reservoir sites provided no data by which chronological alinement of Caddoan and Lower Mississippi complexes can be accurately demonstrated. The two Fulton Aspect sites, Knight's Bluff and Sherwin, contain pottery that is indistinguishable from the Baytown-like pottery at the Snipes Site, and the Knight's Bluff Site yielded one sherd which may be of the type Marksville Stamped. The Snipes Site contained Caddoan pottery of both Fulton and Gibson Aspect types, but relationships to the principal occupation by Lower Mississippi peoples is obscure. Presence of Caddoan ceramics at the Lower Mississippi component (Snipes) suggests some sort of relationship between the Caddoan and Lower Mississippi Areas, but the nature of the relationship cannot be determined. These vague suggestions from the three Texarkana Reservoir sites, however, support evidence at the Hatchel and A. P. Williams sites that Baytown Period ceramic types survived into Fulton Aspect times.

Conclusions.—The Knight's Bluff Site was first occupied by peoples of the East Texas Aspect, an Archaic culture of broad distribution. Economy was probably based on hunting and gathering of vegetal products and shellfish, a type of existence that resulted in seasonal nomadism related to movements of game and harvest cycles of wild products. Neither ceramics nor agriculture had yet appeared in the area, and the bow and arrow were evidently unknown.

After the site had been abandoned by East Texas Aspect peoples, the Knight's Bluff Village occupied the same spot. The village was apparently a small, sedentary settlement of agriculturalists who built permanent houses, were expert potters, and who hunted with the bow and arrow. Well-developed religious practices are indicated by standard burial customs, including such features as placement of the body in a supine position with head toward the southeast and inclu-

sion of mortuary offerings in the graves. Fronto-occipital head deformation was practiced by binding the heads of children. Artifact types, especially ceramics, indicate temporal and cultural alignment of the Knight's Bluff Village with the Fulton Aspect, more specifically the Texarkana Focus. Gibson Aspect traits are present, probably as survivals, suggesting a relatively early position for the component with respect to the Texarkana Focus.

The Sherwin Site seems to represent a small village of people closely related to the Knight's Bluff Village. Economy, burial customs, and type of cranial deformation were quite similar at the two villages. Trends in ceramic development and a relative scarcity of Gibson Aspect traits suggest that the Sherwin occupation dates slightly later than Knight's Bluff.

The Snipes Site represents an extension of Baytown Period peoples from the Lower Mississippi Valley into northeastern Texas.* Economy was probably similar to that of the Texarkana Focus, but head deformation was not practiced and burial customs differed from Fulton Aspect customs in that burials were inconsistent with regard to orientation and body position. Closest ties seem to be with the Troyville Period (or period E-D) of the Lower Mississippi Valley to the east. Relationship of this particular component to Caddoan peoples is uncertain, but there is evidence from other sites that marginal Baytown Period occupation of the Caddoan Area—as represented by Snipes and other related sites—was partly contemporaneous with the Fulton Aspect.

Differences in quantitative representation of pottery types at Knight's Bluff, Sherwin, and the Hatchel Site (type site of the Texarkana Focus) emphasize a general observation that a focus (as that classificatory unit has been applied in the Caddoan Area) is not necessarily a closely integrated complex of traits found with little or no variation from site to site. Actually a focus might be thought of as having very flexible limits that allow considerable variation in trait inventories at the different components of the focus. This variation is dependent not only on cultural selectivity and diffusion, but also on the geographical and temporal position of the site, and can be best interpreted, the present writer believes, in terms of typological distribution patterns.

*AUTHOR'S NOTE. In this discussion I have referred several times to occupation of the Caddoan Area by peoples of Lower Mississippi affiliation. I do not mean to imply that there was necessarily an actual migration of people involved. Lower Mississippi traits unquestionably occur in significant quantity in a Caddoan Area; whether this is a result of migration or of diffusion is unknown at present.

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EXPLANATION OF PLATES

PLATE 1

Pottery vessels. *a*, *b*, *c*, and *d* from burial 2, Knight's Bluff Site; *e*, *f*, and *g* from burial 4, Knight's Bluff Site. *a* is type Haley Engraved; *b* and *c* are type Nash Neck Banded; *d* and *f* are type Antioch Engraved; *e* is type Pease Brushed-Incised; *g* is of unidentified type. Size $\frac{1}{4}$.

PLATE 2

Pottery vessels. *a* from burial 5, Knight's Bluff Site; *b*, *c* from burial 7, Knight's Bluff Site; *d* and *e* from burial 9, Knight's Bluff Site; *f* and *g* from burial 10, Knight's Bluff Site. *a*, *e*, and *g* are type Pease Brushed-Incised; *b* is type Friendship Engraved; *c* is type Antioch Engraved; *d* is type Haley Engraved, and *f* is possibly a variant of Haley Engraved. Size $\frac{1}{4}$.

PLATE 3

Pottery vessels. *a*, *b*, and *c* from burial 11, Knight's Bluff Site; *d* from Knight's Bluff Site, not in a burial; *e* from the Clements Site, Cass County, Tex. *a* is type Pease Brushed-Incised; *b* is a possible variant of type Haley Engraved; *c* is an engraved bowl of unidentified type; *d* is type Nash Neck Banded; *e* is type Cass Applied. Size $\frac{1}{4}$.

PLATE 4

Pottery vessels. *a* from burial 1, Snipes Site; *b* from burial 6, Snipes Site; *c* from burial 7, Snipes Site; *d* from burial 8, Snipes Site; *e* from burial 9, Snipes Site; *f* from Snipes Site (not in a burial); *g* and *h* from burial 1, Sherwin Site. *a*, *c*, *d*, and *e* are of Baytown-like paste; *b* is type Coles Creek Incised; *g* is type Pease Brushed-Incised; *h* is possibly type Maddox Band Engraved; *f* is unidentified Caddoan form. Size $\frac{1}{4}$.

PLATE 5

Pottery vessels. *a* from burial 2, Sherwin Site; *b* and *c* from burial 3, Sherwin Site; *d*, *e*, and *f* from burial 4, Sherwin Site; *g*, *h*, and *i* from burial 6, Sherwin Site. *a* is possibly type Maddox Engraved; *b*, *g*, and *h* are type Nash Neck Banded; *i* is type Haley Engraved; *c*, *d*, *e*, and *f* are unidentified as to type. Size $\frac{1}{4}$.

PLATE 6

Pottery vessels. *a* and *b* from burial 7, Sherwin Site; *c*, *d*, and *e* from burial 8, Sherwin Site; *f* from burial 9, Sherwin Site. *b* is probably a variant of type Haley Engraved; *c* and *d* are type Higgins Engraved; *f* is an engraved bottle of unidentified type. Size $\frac{1}{4}$.

PLATE 7

Potsherds. *a* is type Hatchel Engraved; *b* is type Antioch Engraved; *c* is type Bowie Engraved; *d* and *e* are type Barkman Engraved; *f* is Barkman motif, but incised instead of engraved; *g* is type Haley Engraved; *h* is type Simms Engraved. *e* and *h* are from the Sherwin Site, all others are from the Knight's Bluff Site. Size $\frac{1}{2}$.

PLATE 8

Potsherds. *a* and *b* are type Pease Brushed-Incised; *c*, *d*, and *e* are type Nash Neck Banded; *f* and *g* are type Belcher Ridged; *h* and *i* are type Dunkin Incised, late variant. *a* and *b* are from the Sherwin Site; *g* is from the Snipes Site; the others are from the Knight's Bluff Site. Size $\frac{1}{2}$.

PLATE 9

Potsherds. *a* and *b* are type Cass Appliqued; *c* is type McKinney Plain; *d* is a sherd from a rattle bowl; *e* through *l* are Baytown-like. *c*, *i*, and *l* are from the Sherwin Site; *e*, *f*, and *j* are from the Snipes Site; the others are from the Knight's Bluff Site. Size $\frac{1}{2}$.

PLATE 10

Potsherds. *a* and *b* are type Pennington Punctated-Incised; *c* and *d* are type Crockett Curvilinear Incised; *e* is Evansville Punctate (?); *f* is Marks-ville Incised; *g* is Marksville Incised; *h* through *p* are Coles Creek Incised or related types of the Lower Mississippi area. *m* is from the Saunders Site; *k* and *l* are from the Hatchel Site; *g* is from the Sherwin Site; *a*, *b*, *d*, *n*, and *o* are from the Knight's Bluff Site; *c*, *e*, *f*, *h*, *i*, *j*, and *p* are from the Snipes Site. Size $\frac{1}{2}$.

PLATE 11

Clay objects and projectile points. *a-g* are fragments of long-stemmed, thin-walled clay pipes; *h* and *i* are fragments of short-stemmed, clay elbow pipes; *j* is a fragment of clay earspool; *k-o* are dart points, type Gary; *p* and *q* are dart points, type Ellis; *r* and *s* are dart points, type Yarbrough; *t* is a Plainview (?) dart point; *u-bb* are arrow points, *u* type Maud, *v* type Bassett, *w* type Fresno, *x-aa* type Alba, *bb* type Perdiz, *c*, *d*, *g*, *h*, *k*, *m*, *n*, *z*, and *bb* are from the Sherwin Site; *a*, *t*, *x*, *y* and *aa* are from the Snipes Site; all others from the Knight's Bluff Site. Size $\frac{1}{2}$.

PLATE 12

Chipped stone artifacts. *a-d*, stemmed knives or spear points (*a*, *b*, and *c* found together in cache at Knight's Bluff); *e*, crude blade; *f-j*, drills and perforators; *k* and *l*, flake scrapers; *m*, heavy side scraper. *i* and *j* from Snipes Site; *m* from Sherwin Site; others from Knight's Bluff Site. Size $\frac{1}{2}$.

PLATE 13

Stone implements. *a*, *b*, and *c*, crude "picks"; *d*, mano; *e*, sandstone hone; *f*, sandstone ball; *g*, small grooved maul or hammerstone of sandstone; *h*, portion of keeled boatstone; *i*, greenstone celt. *i* from burial 1, Snipes Site; *c* from Sherwin Site; others from Knight's Bluff Site. Size $\frac{1}{2}$.

PLATE 14

Miscellaneous specimens. *a*, *b* and *c*, celts; *d*, full-grooved ax of hematite; *e*, quartz crystal; *f*, flaking implement made from deer ulna; *g*, fish bone awl; *h*, deer bone awl; *i*, deer bone bead; *j*, mussel shell pendant; *k*, perforated mussel shell; *l*, conch shell pendant. *e* and *l* from Sherwin Site (*l* from burial 3); others from Knight's Bluff Site (*j* from burial 7). Size $\frac{1}{2}$; except *a-d*, $\frac{1}{4}$.

PLATE 15

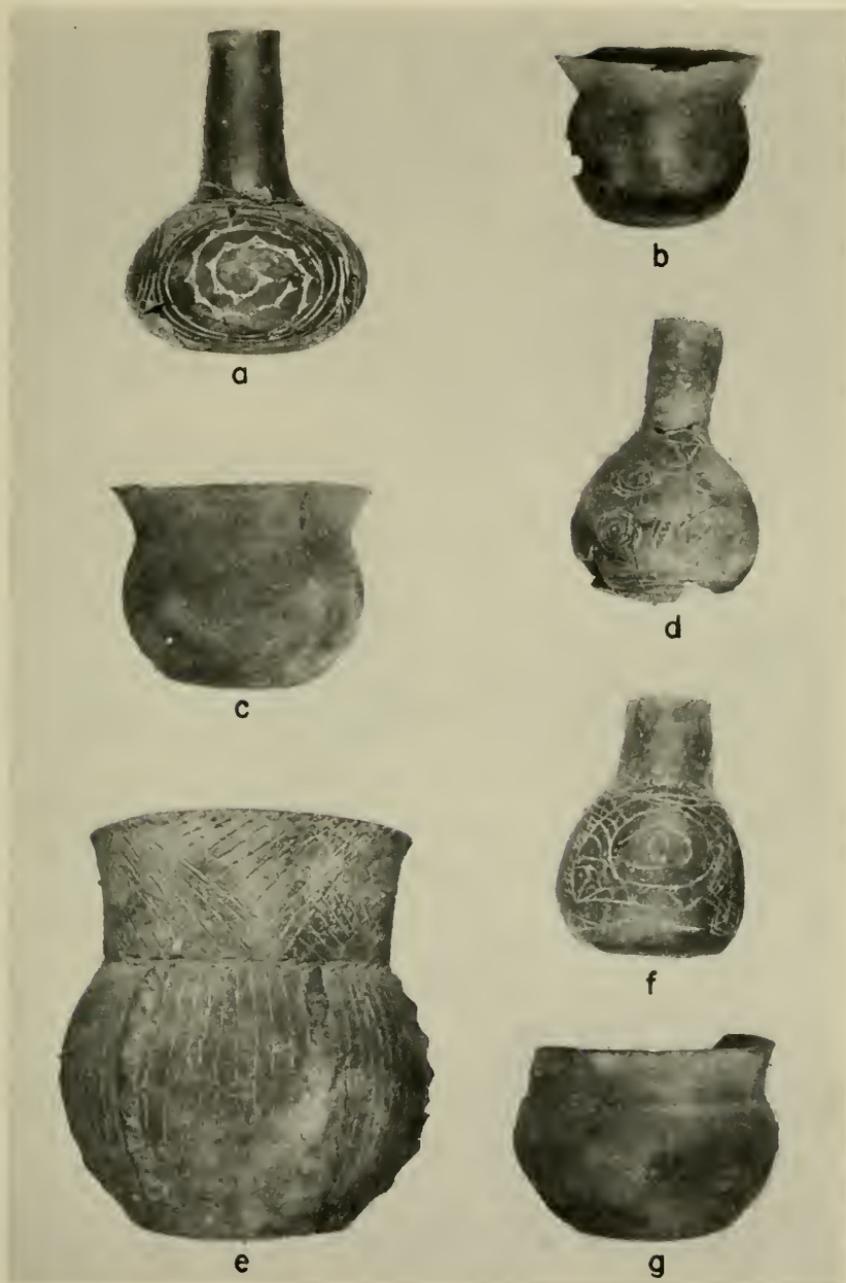
Typical burials at the Knight's Bluff, Snipes, and Sherwin Sites.

PLATE 16

Front and side views of skulls. *a* and *b*, burial 4, Knight's Bluff Site; *c* and *d*, burial 5, Knight's Bluff Site; *e* and *f*, burial 6, Knight's Bluff Site.

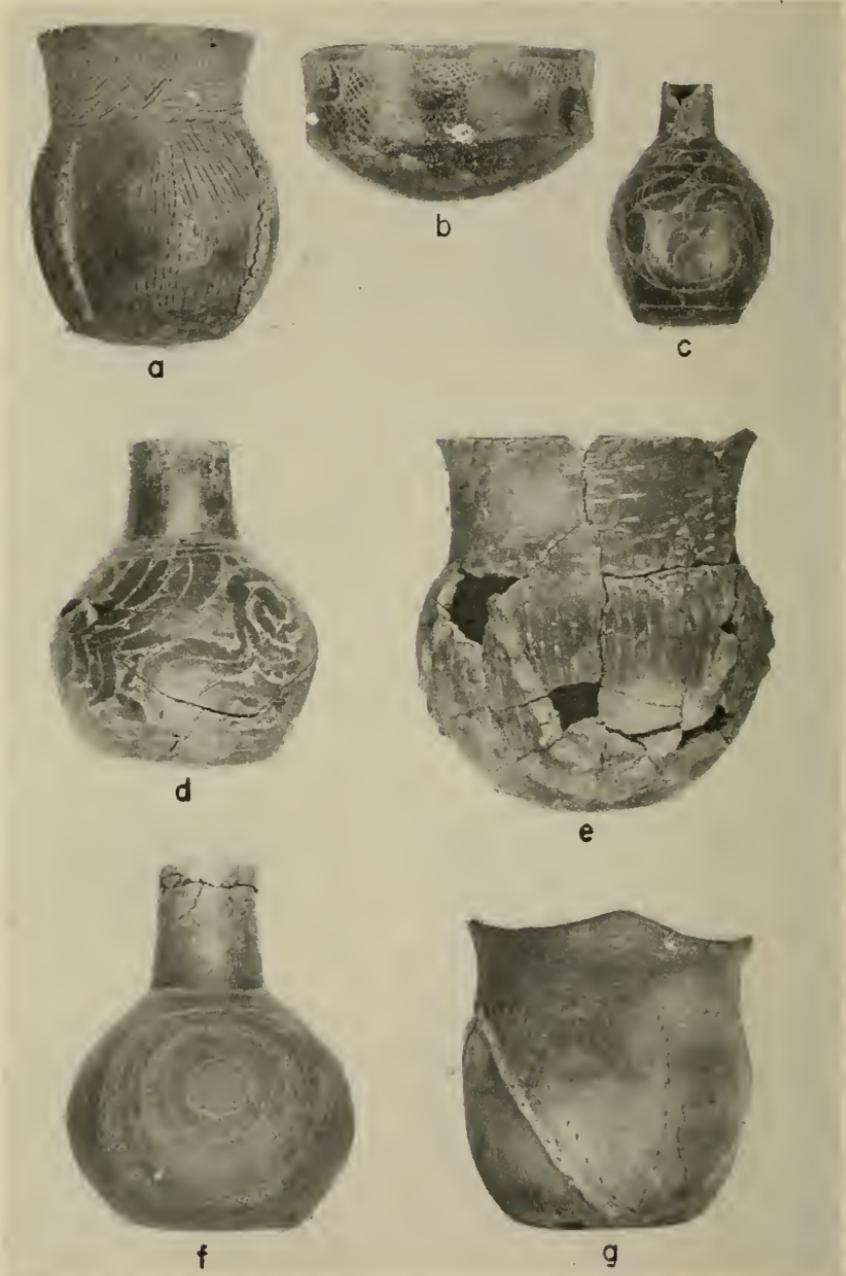
PLATE 17

Front and side views of skulls. *a* and *b*, burial 9, Knight's Bluff Site; *c* and *d*, burial 3, Snipes Site; *e* and *f*, burial 7, Snipes Site; *g* and *h*, burial 5, Sherwin Site.



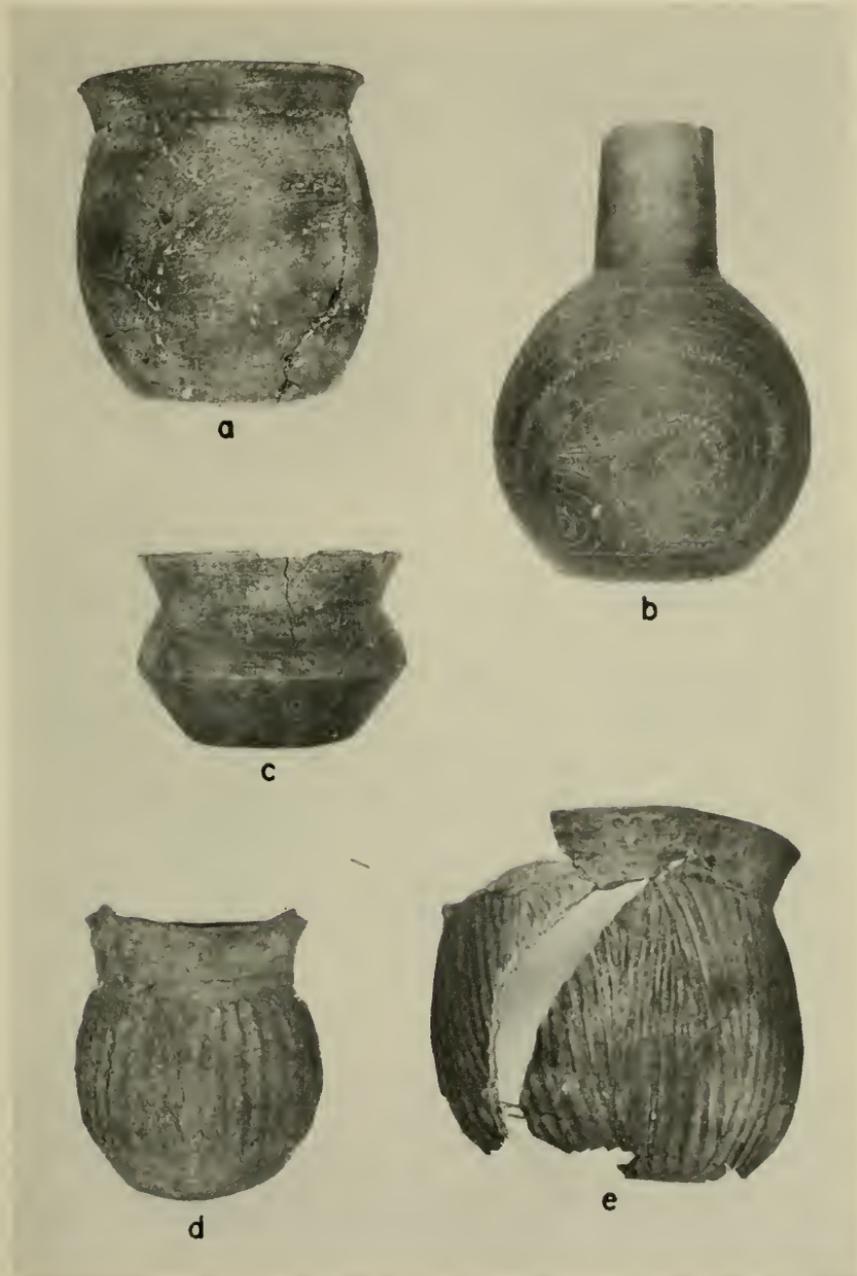
Pottery vessels. *a*, Haley Engraved; *b*, *c*, Nash Neck Banded; *d*, *f*, Antioch Engraved; *e*, Pease Brushed-Incised; *g*, unidentified.

(For explanation, see p. 76)



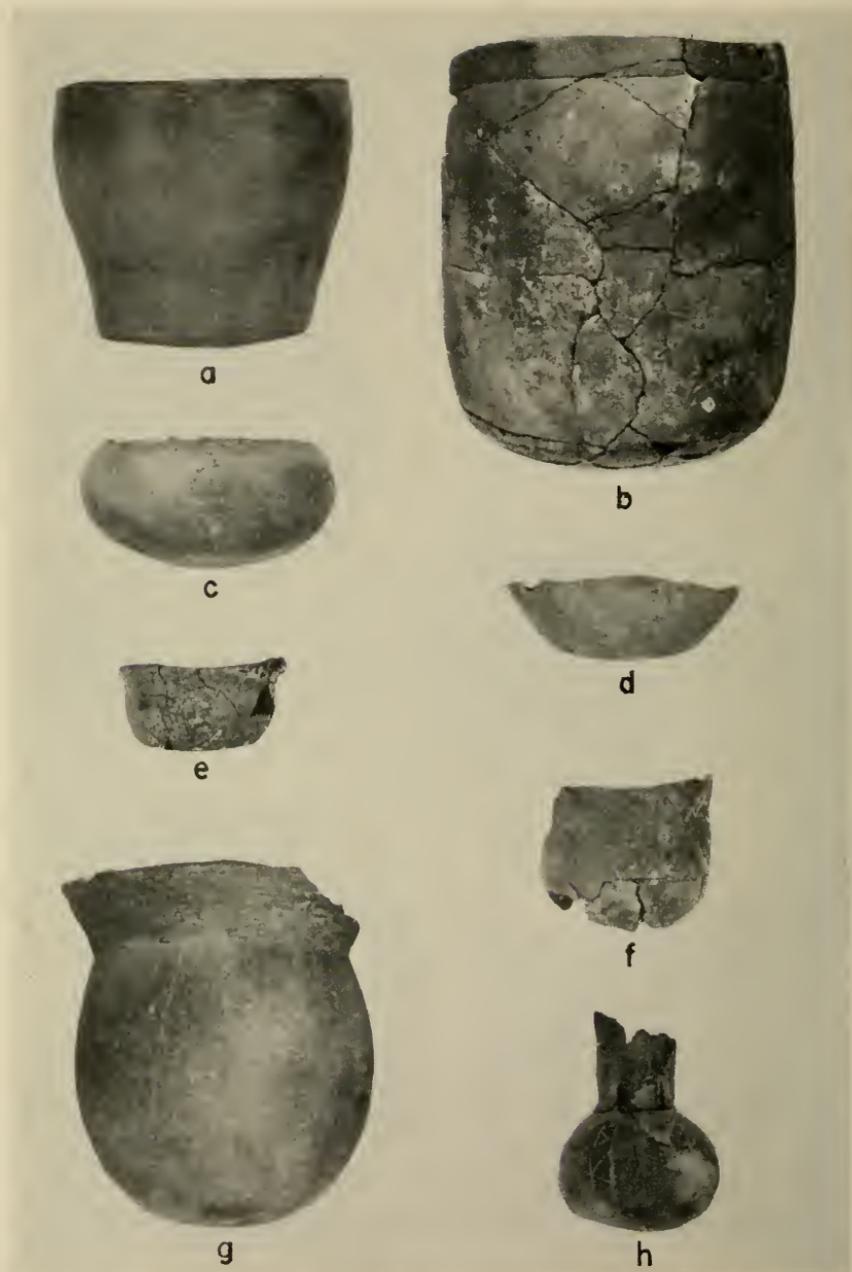
Pottery vessels. *a, e, g*, Pease Brushed-Incised; *b*, Friendship Engraved; *c*, Antioch Engraved; *d*, Haley Engraved; *f*, possibly variant of Haley Engraved.

(For explanation, see p. 76)



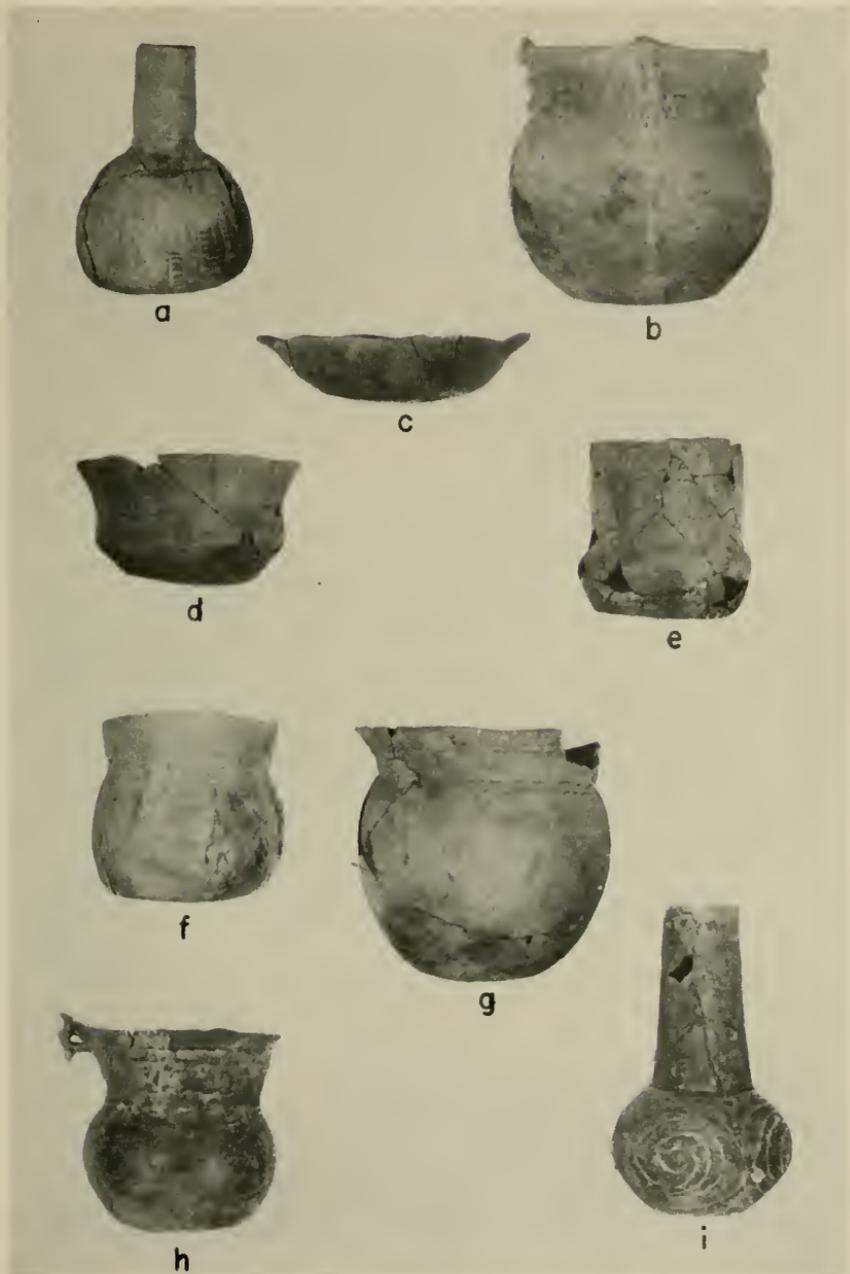
Pottery vessels. *a*, Pease Brushed-Incised; *b*, possible variant of Haley Engraved; *c*, engraved bowl of unidentified type; *d*, Nash Neck Banded; *e*, Cass Applied.

(For explanation, see p. 76)



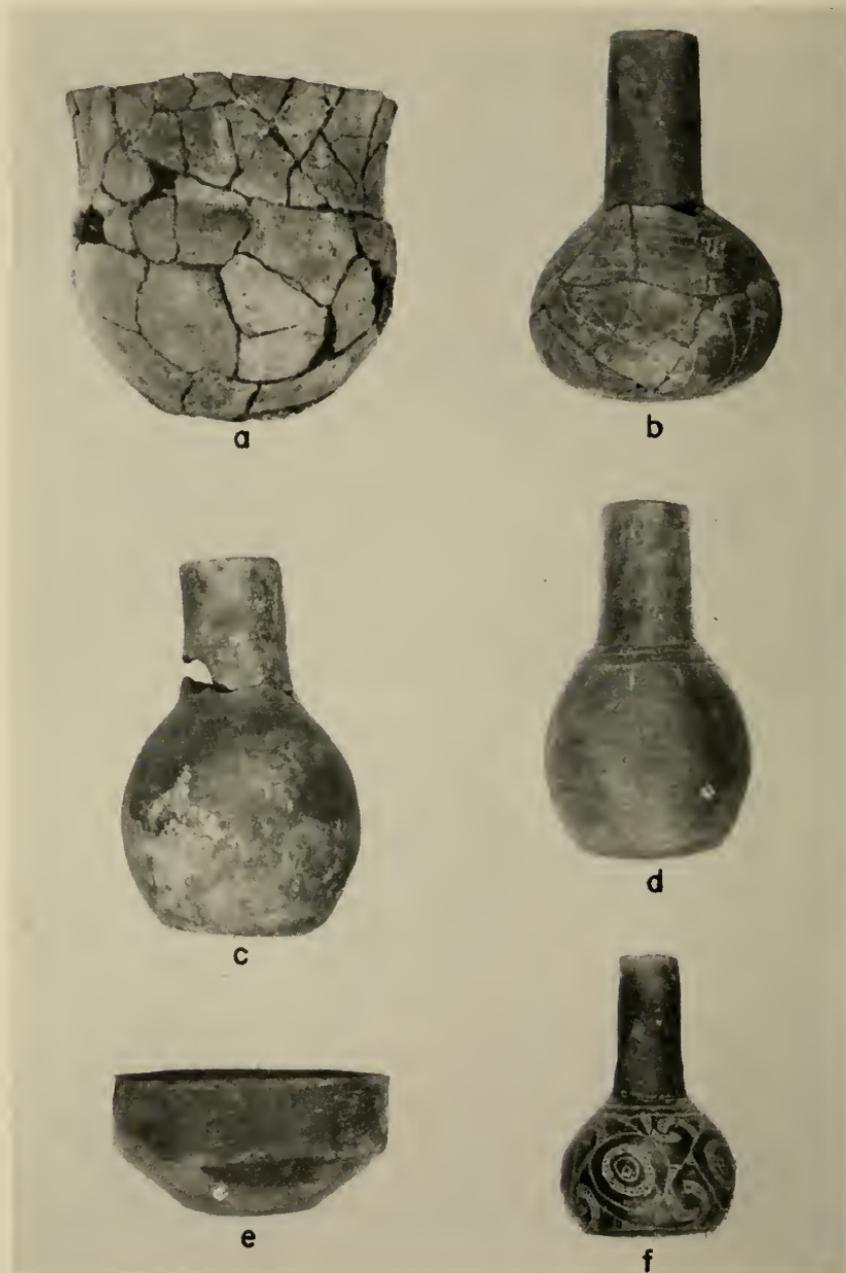
Pottery vessels. *a, c, d, e*, of Baytown-like paste; *b*, Coles Creek Incised; *g*, Pease Brushed-Incised; *h*, possibly Maddox Band Engraved; *f*, unidentified Caddoan form.

(For explanation, see p. 76)



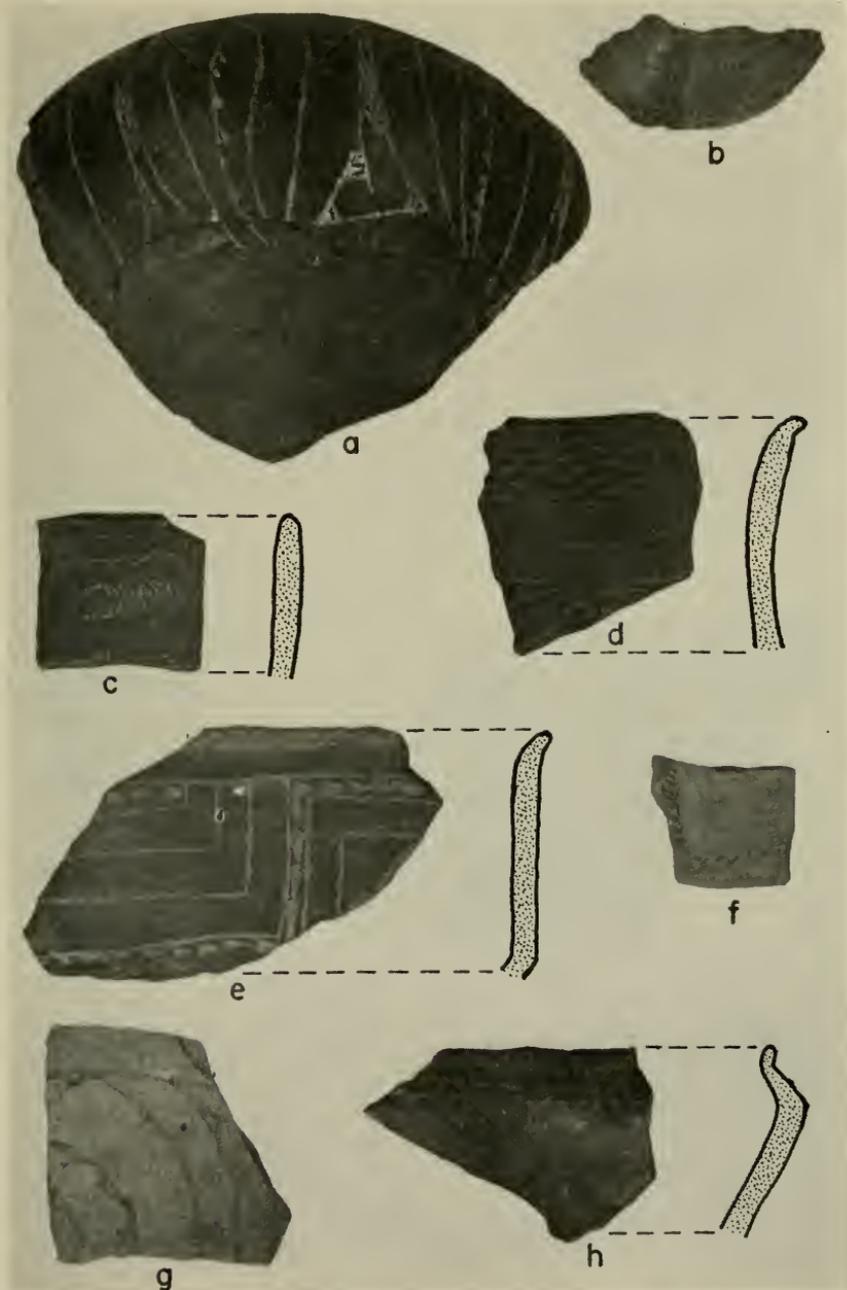
Pottery vessels from Sherwin Site. *a*, possibly Maddox Engraved; *b*, *g*, *h*, Nash Neck Banded; *i*, Haley Engraved; *c*, *d*, *e*, *f*, unidentified as to type.

(For explanation, see p. 76)



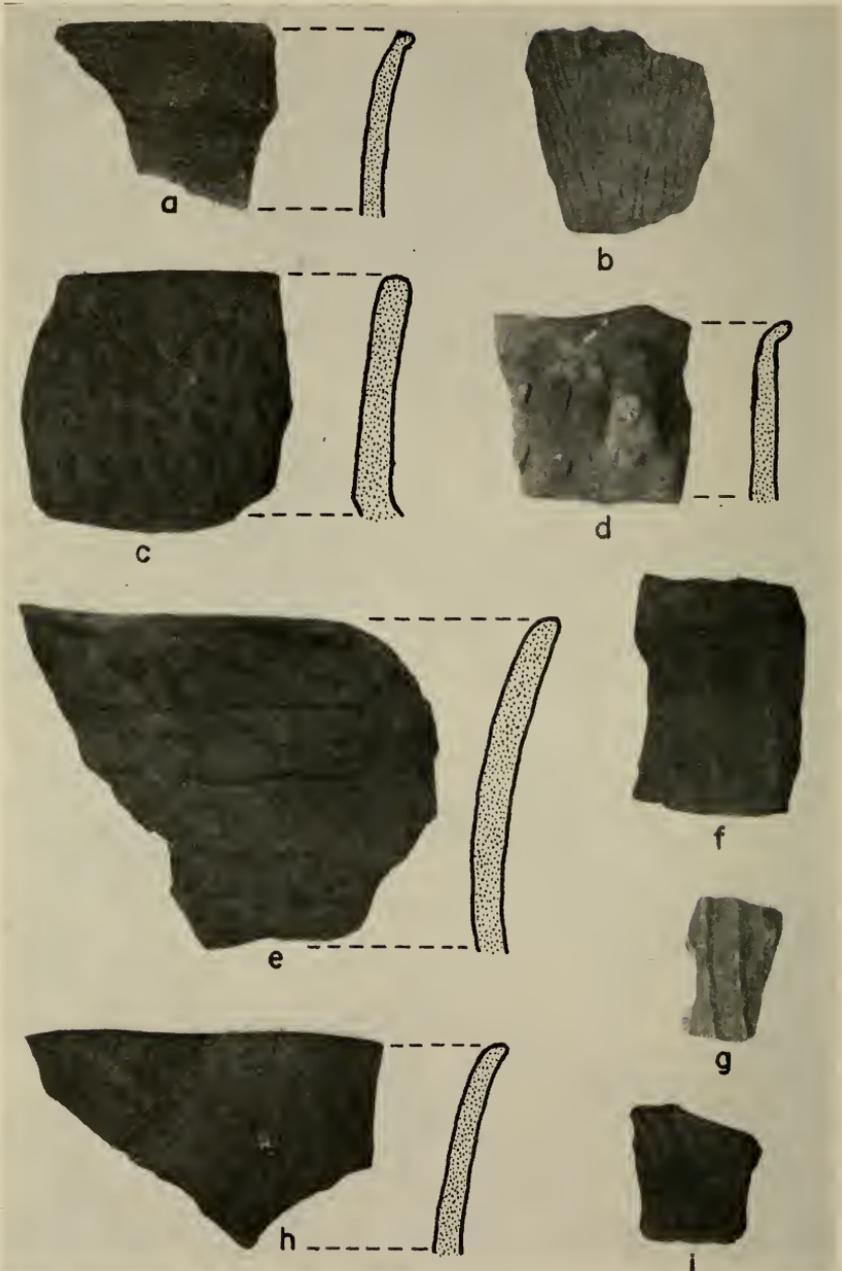
Pottery vessels from Sherwin Site. *b*, probable variant of Haley Engraved; *c*, *d*, Higgins Engraved; *a*, *e*, *f*, unidentified as to type.

(For explanation, see p. 77)



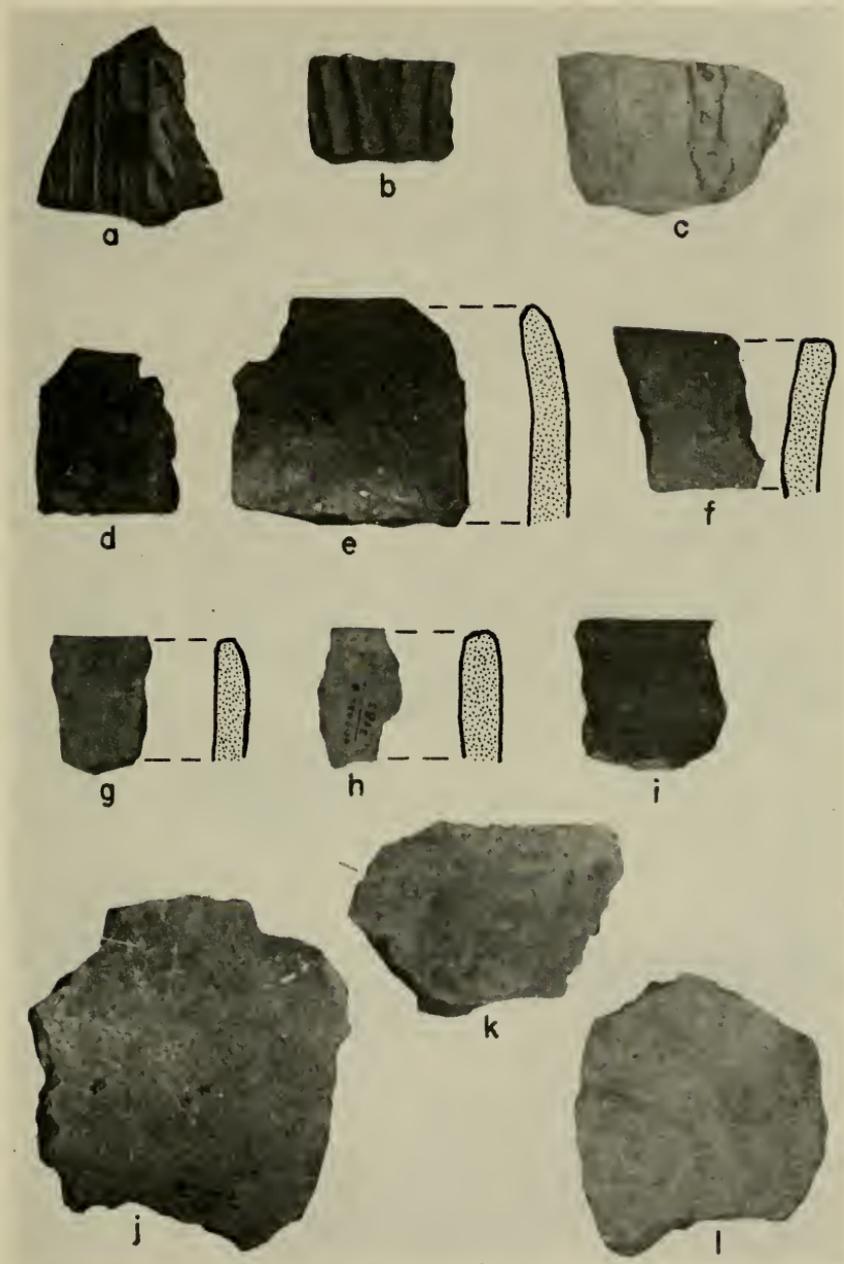
Potsherds. *a*, Hatchel Engraved; *b*, Antioch Engraved; *c*, Bowie Engraved; *d*, *e*, Barkman Engraved; *f*, Barkman motif, incised instead of engraved; *g*, Haley Engraved; *h*, Simms Engraved.

(For explanation, see p. 77)



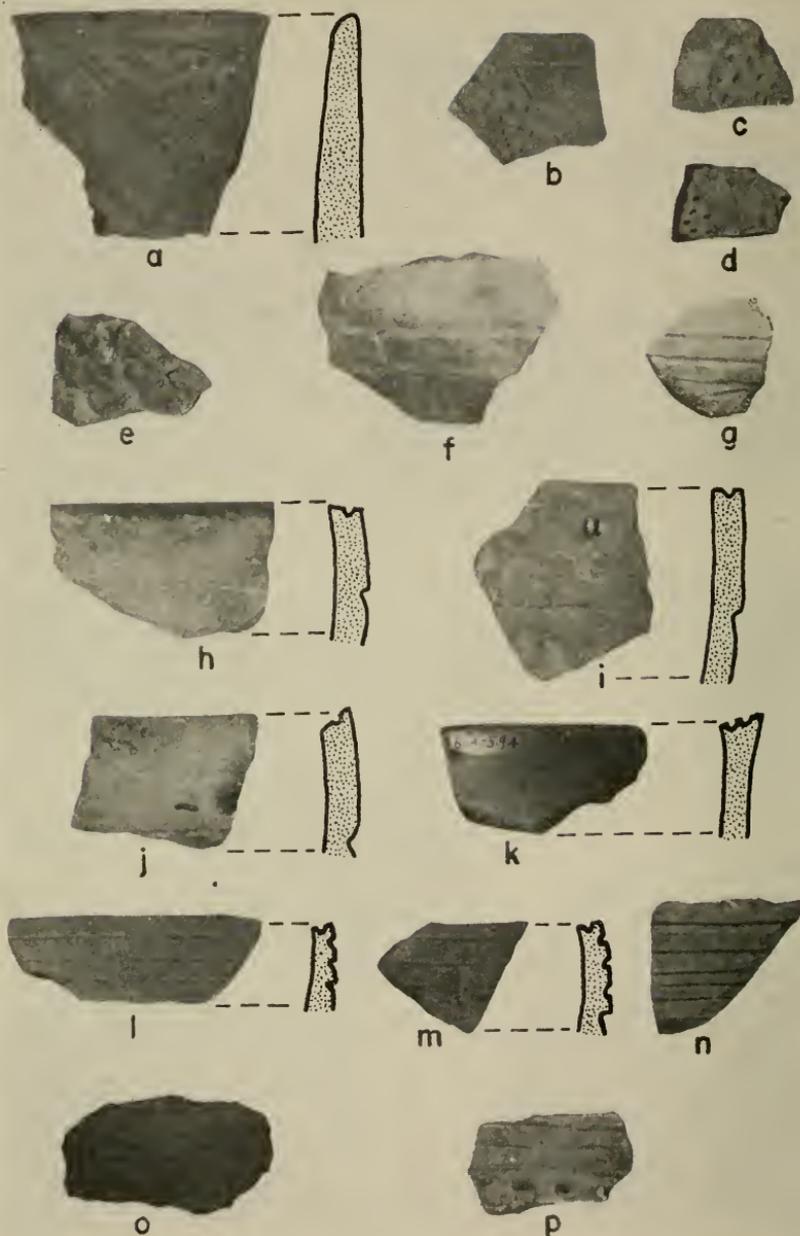
Potsherds. *a, b*, Pease Brushed-Incised; *c, d, e*, Nash Neck Banded; *f, g*, Belcher Ridged; *h, i*, Dunkin Incised, late variant.

(For explanation, see p. 77)



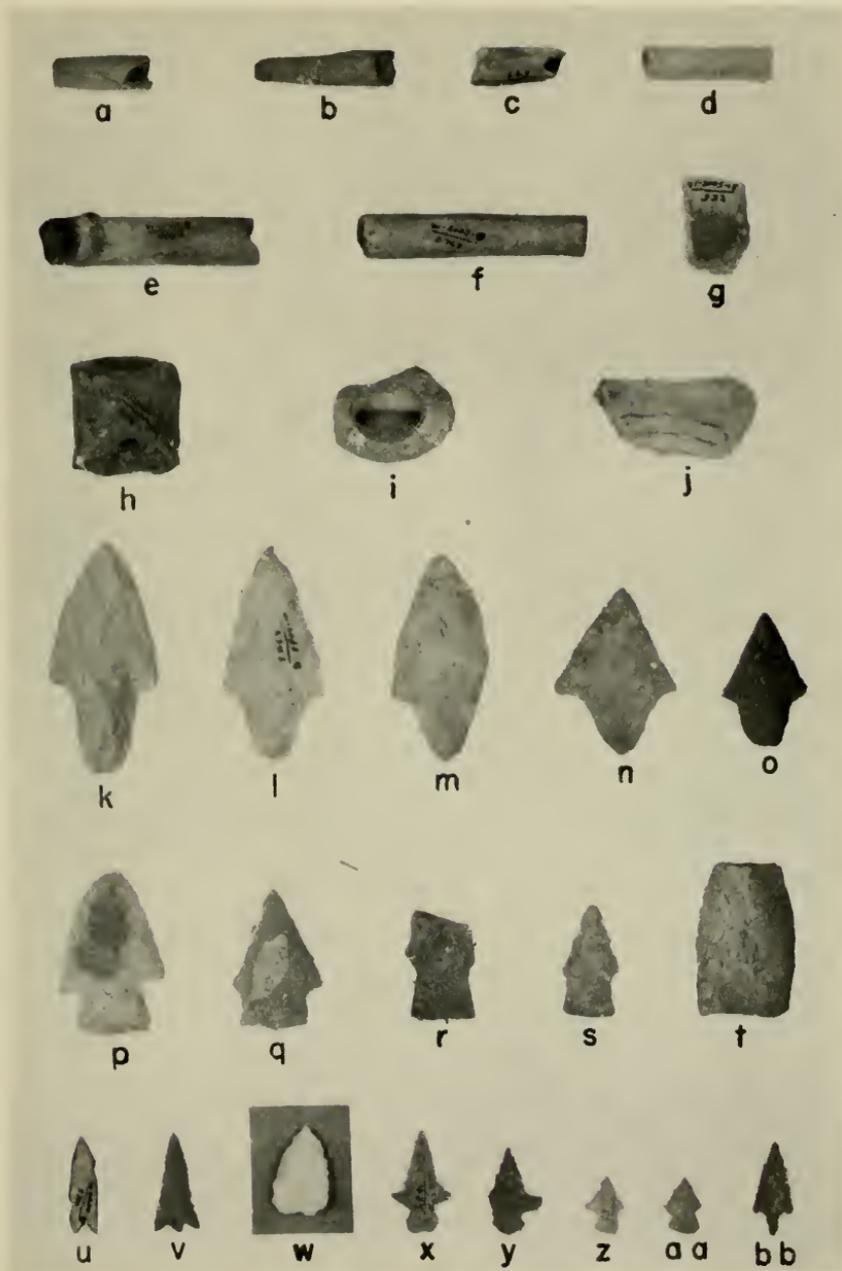
Potsherds. *a, b*, Cass Applied; *c*, McKinney Plain; *d*, sherd from a rattle bowl; *e-l*, Baytown-like.

(For explanation, see p. 77)



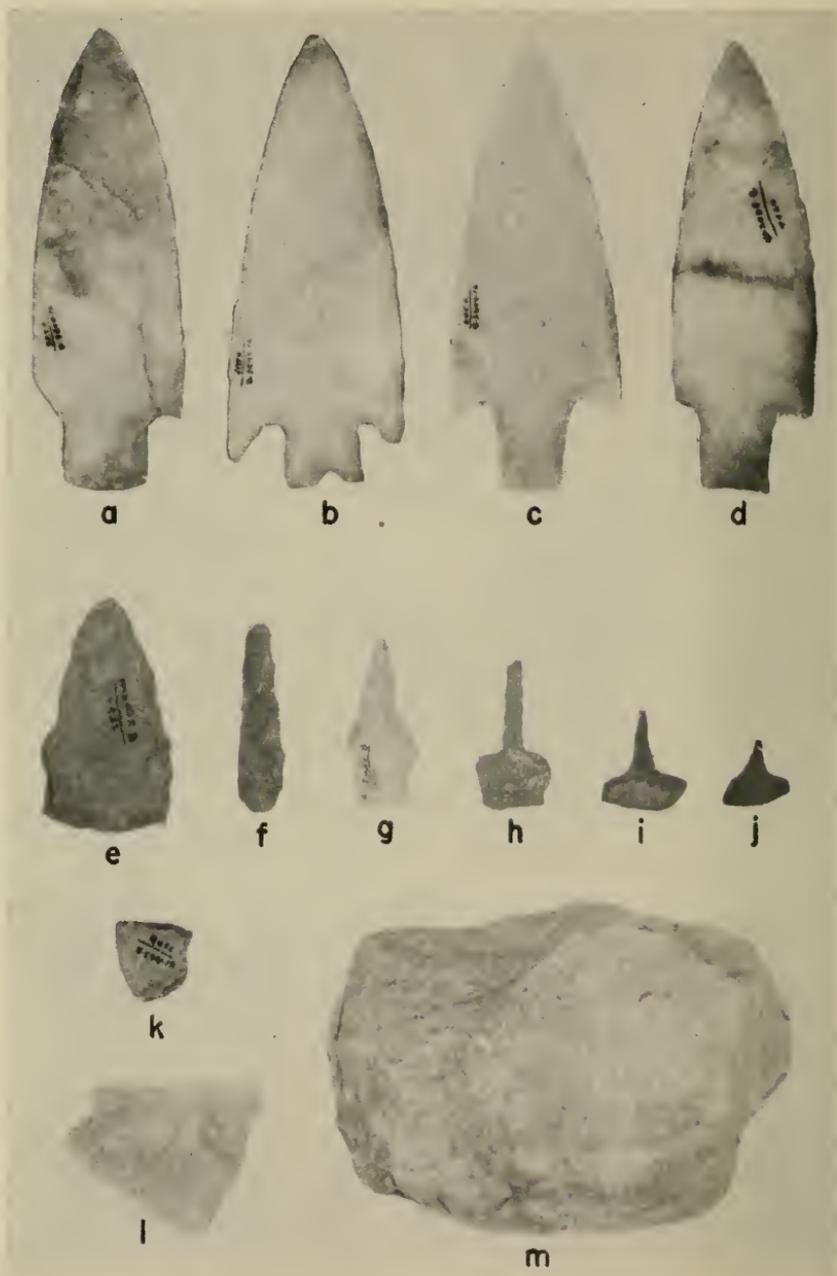
Potsherds. *a, b*, Pennington Punctated-Incised; *c, d*, Crockett Curvilinear Incised; *e*, Evansville Punctate (?); *f, g*, Marksville Incised; *h-p*, Coles Creek Incised or related types of the Lower Mississippi area.

(For explanation, see p. 77)

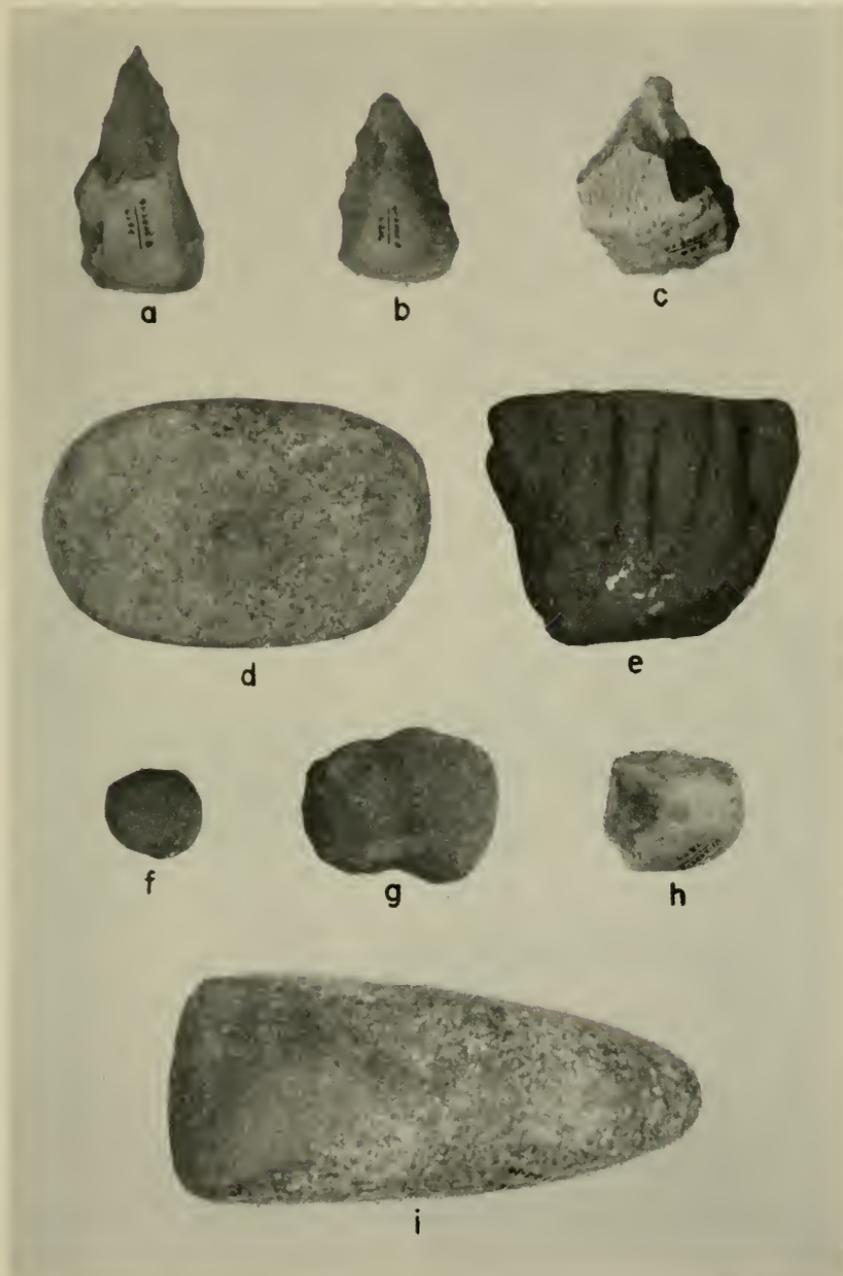


Clay objects and projectile points.

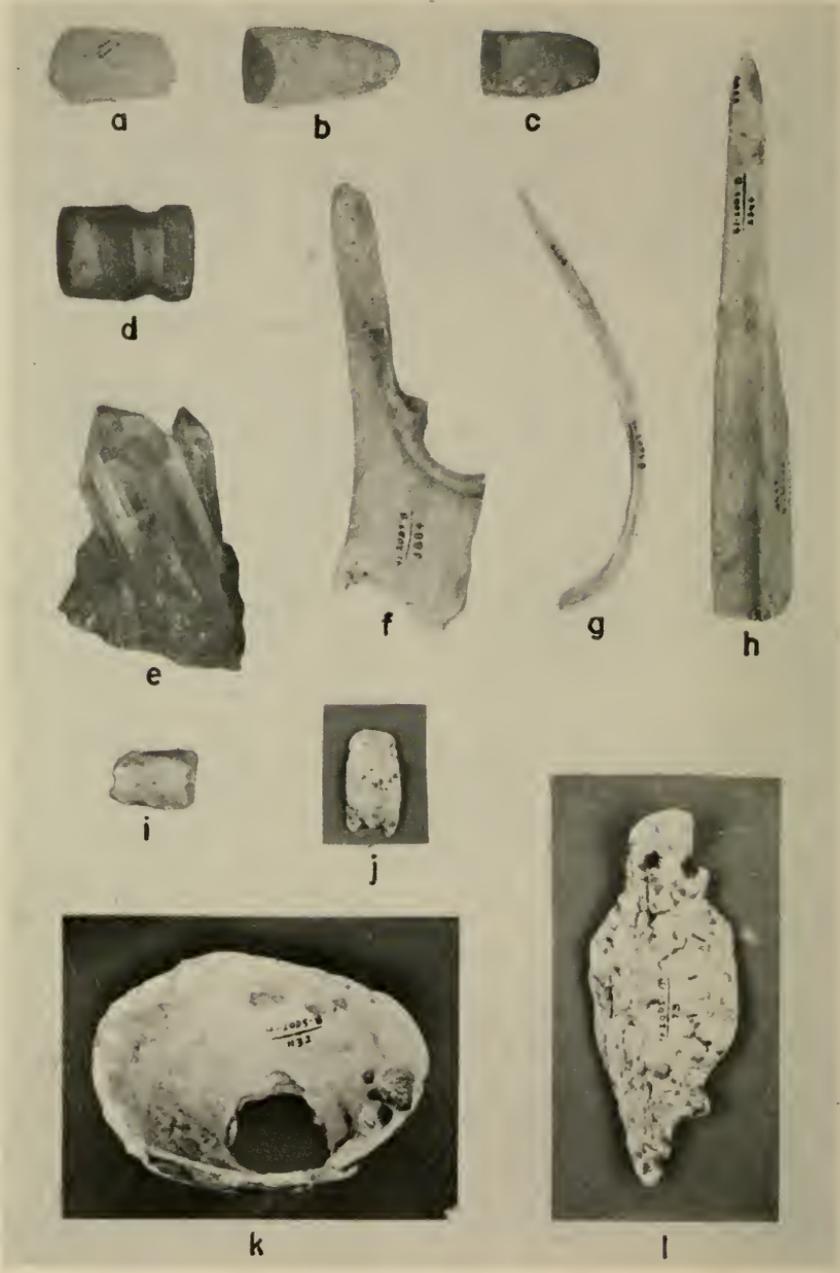
(For explanation, see p. 77)



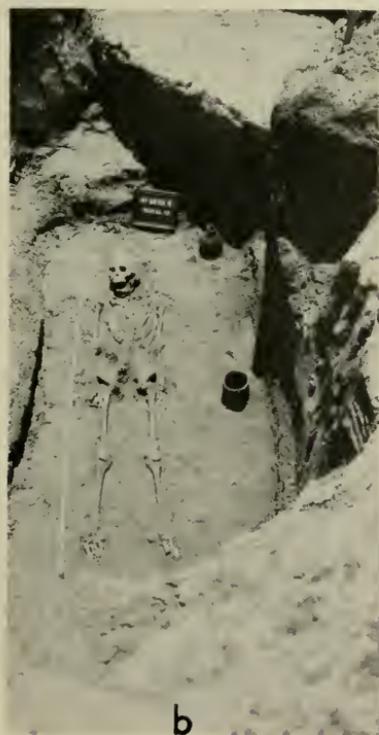
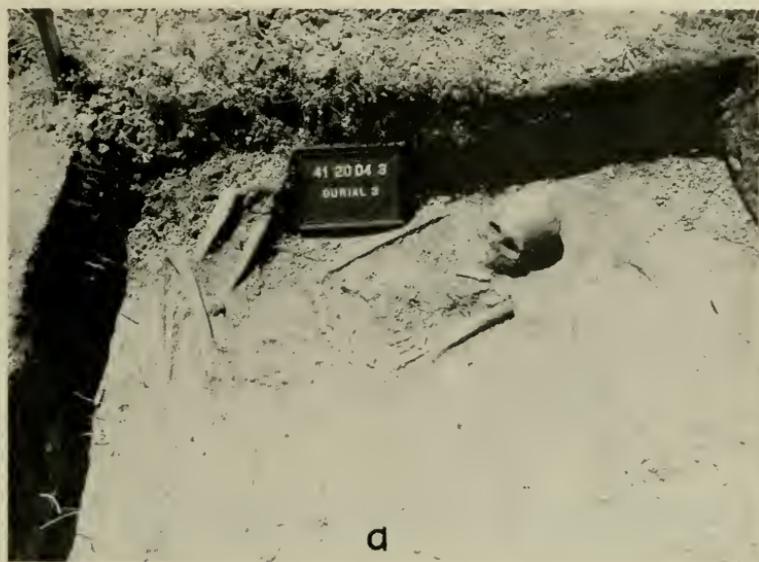
Chipped stone artifacts.
(For explanation, see p. 77)



Stone implements.
(For explanation, see p. 78)

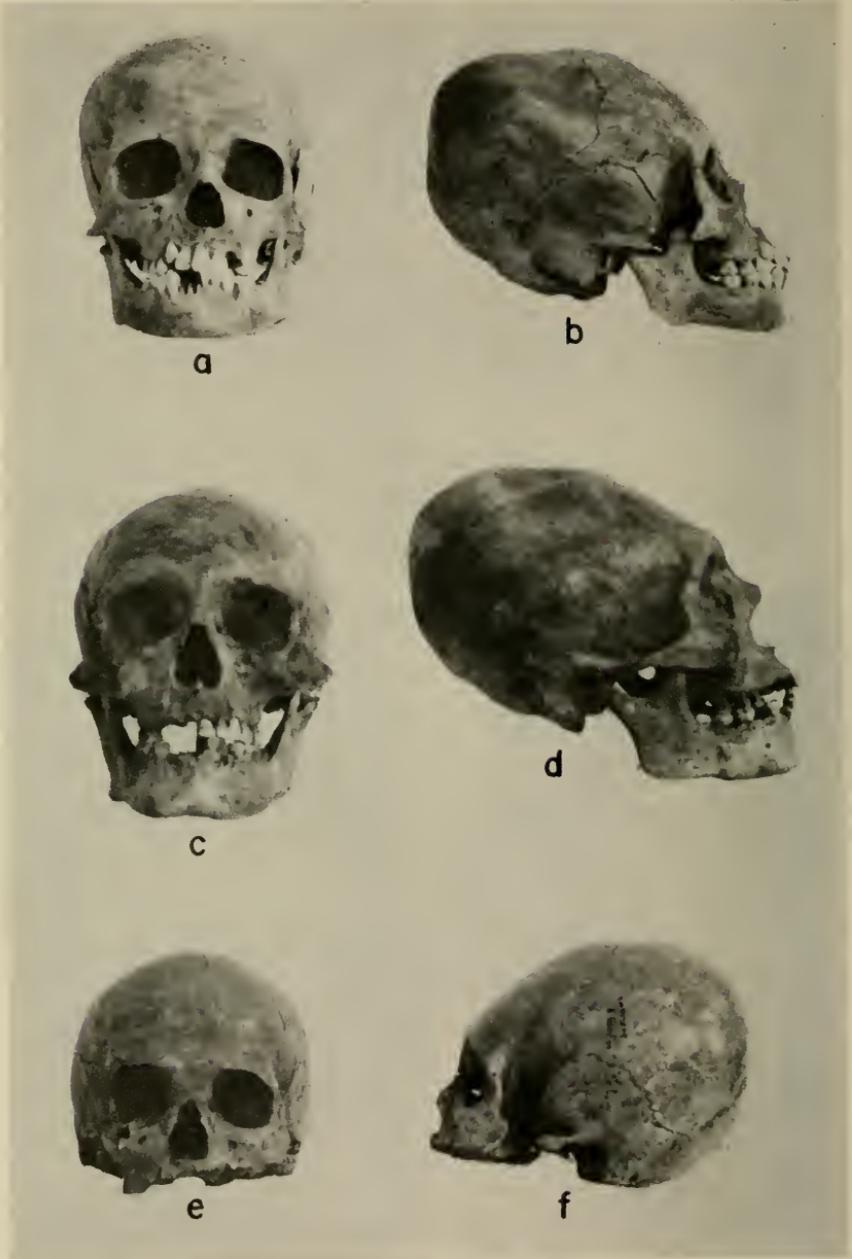


Miscellaneous specimens.
(For explanation, see p. 78)



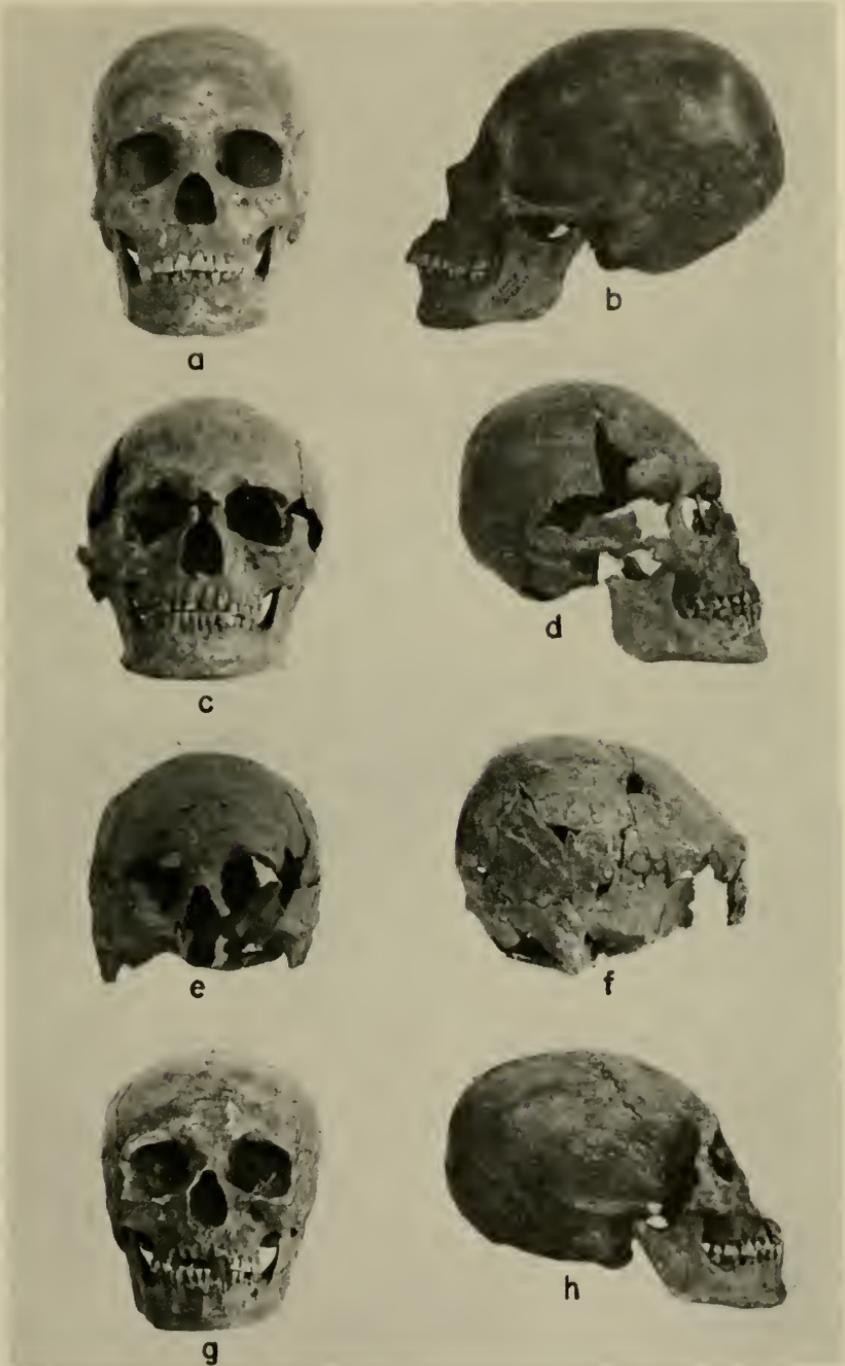
Typical burials.

(For explanation, see p. 78)



Front and side views of skulls.

(For explanation, see p. 78)



Front and side views of skulls.
(For explanation, see p. 78)